# PROMOTING COMMUNITY COLLEGE STUDENT COMPLETION THROUGH ON-DEMAND INFORMATIONAL VIDEO MODULES

by
Kyla H. Wegman

A dissertation submitted to Johns Hopkins University in conformity with the requirements for

the degree of Doctor of Education

Baltimore, Maryland
July 2021

## Abstract

Given the individual and societal benefits of earning a higher education credential, such as advancements across academic fields and increased rates of civic and political engagement, the decrease in educational attainment in the United States is cause for concern (Bowen, Chingos, & McPherson, 2009). By 2016-2017, the 2011-2012 California community college statewide student cohort had only achieved a 48.2% completion rate (California Community College Chancellor's Office, 2019). Facing similar completion rates as the rest of California, by 2016-2017, students at one community college in the San Francisco Bay Area, Oak Tree Community College (OTCC), had achieved a 52.3% rate of completion six years after their initial enrollment (California Community College Chancellor's Office, 2019). A needs assessment conducted during the spring 2019 semester concluded that students at OTCC do not understand the requirements for completing a degree or certificate and/or transferring, seeking out support services can be arduous and inconvenient, and students do not define success that same way as the state chancellor's office. In an effort to increase student knowledge and ultimately increase program completion, the author created and piloted an informational video module program in two degree-applicable, transfer-level courses at OTCC during the fall 2020 semester. The intervention program yielded statistically significant ($p < .01$) increases in participant knowledge of program completion requirements, available support services, and how the college defines student success. Findings of the study suggest the intervention's efficacy for on-demand informational video modules as a supplemental resource to existing student support services.



*Keywords:* community college, on-demand video modules, student completion



**Dissertation advisor:** Nicholas Michelli, Ed.D.
**Committee member:** Carey Borkoski, Ph.D., Ed.D.
**Committee member:** Elizabeth Todd Brown, Ph.D.

## Dedication

To my loving parents. Thank you for teaching me the value of education and for always believing in me.

**Acknowledgements**

The completion of this doctorate is due in large part to support from my family, friends, and colleagues. First, thank you to my dissertation committee Drs. Nicholas Michelli, Carey Borkoski, and E. Todd Brown for your encouragement, wisdom, and challenging me to grow as a writer, researcher, and educator. Thank you to the faculty and mentors at Johns Hopkins University, particularly Drs. Carey Borkoski and Karen Caldwell, for reigniting my love of learning and for responding to my emails, phone calls, and texts at all hours of the day and night.

Thank you to my colleagues, mentors, and students for allowing me into your lives and for sharing your experiences with me. Your encouragement and participation in this study allowed me to grow both professionally and personally, for which I am forever grateful. Thank you to my family and friends for your endless words of encouragement, your willingness to laugh and to cry with me throughout this process, and for being in my life during these past three years. And to my best friend and partner, John, thank you for your love, your constant cheerleading, and for being even more excited about my doctorate than I am. I could not have done this without you.

Finally, I want to thank Patricia Szasz, Elaine Young, and Denice Inciong. Without the three of you, this dissertation and degree would not have been possible. For the past three years, we have shared every success, every challenge, and every mundane detail of our lives. Thank you for being there every step of the way and for ensuring that we all crossed this finish line together.

## Table of Contents

## List of Tables

## List of Figures

## Executive Summary

While the perception of the value of a college credential has ebbed and flowed throughout time, there remains a broadly held belief that individuals with more years of education will be afforded higher levels of human capital, and therefore experience more and better opportunities economically, socially, and politically (Bowen, Chingos, & McPherson, 2009). Specifically, completing a college degree is associated with these higher levels of human capital as opposed to students who enroll in college, but never complete a program (Bowen et al., 2009).

## Problem of Practice

Community college students come from increasingly diverse backgrounds and often face barriers such as first-generation to attend college, English language learners, full-time and part-time work obligations, family responsibilities, and low socioeconomic status (SES; Porchea, Allen, Robbins, & Phelps, 2010). Given these challenges that many community college students face, they often feel a sense of accomplishment from milestones such as completing one semester of classes, finishing their general education requirements, or earning a job based on the skills they developed through their classes (Boggs, 2011). However, none of those accomplishments are recognized by the chancellor's office metrics of student success (California Community College Chancellor's Office, 2019).

## Factors Relating to Community College Student Success

A review of literature on community college student completion used Bean's (1982) student attrition model as a theoretical framework. Bean's (1982) synthetic model of student attrition identified four categories of variables that have a direct or indirect impact on a student's intent to leave an institution and ultimately drop-out: background variables, organizational

variables, environmental variables, and attitudinal and outcome variables. Bean (1982) posited that while the model cannot fully explain drop-out behavior at institutions nationally, it could measure a student's probability of drop-out given certain known factors and characteristics, such as those explored in the literature review. The author confirmed, based on the review literature, that Bean's seminal work on student attrition is still relevant given the complexity of factors that contribute to college student attainment (e.g., Bowen et al., 2009; Nitecki, 2011; Shapiro et al., 2016).

Through the literature synthesis, beginning with background, factors such as race, gender, academic preparation, and age were examined with regard to program completion and time to completion. Objective interaction with the organization included institutional characteristics, access to courses, the role of faculty, the role of counselors, and financial aid. Environmental factors were considered specifically by exploring the definition of community college student success, community college funding models, SES, and cultural capital. Lastly, attitudes and beliefs were examined through student characteristics such as self-development, practical value of education, educational goals, and cultural capital.

## Context and Findings of the Needs Assessment

Founded in 1918, OTCC has been serving students in the San Francisco Bay Area for the last 102 years. As of the 2018-2019 academic year, the OTCC 2011-2012 student cohort demonstrated that 36.9% of students transferred to a four-year university, 19.6% of students earned an associate degree, and 3.8% of students earned a certificate (California Community College Chancellor's Office, 2019). The needs assessment comprised data that were collected from students, counselors, instructional faculty, and administrators through a survey and semi-structured interviews.

Overall, three key findings emerged from the needs assessment data. First, data emerged that the students interviewed in the needs assessment did not understand the requirements necessary to earn a certificate or degree and/or transfer. Moreover, interviews with instructional faculty, counselors, and students confirmed that many students do not understand foundational concepts such as general education requirements versus a major, unit requirements, and transfer timelines. Second, both the survey and interview data confirmed that seeking out support services can be inconvenient and arduous for students. Many students cited long wait times or confusing information from counseling ($n$ = 175) and financial aid ($n$ = 484), while others shared that despite being part of grant-funded programs and smaller learning communities, they still had to seek out accurate and helpful information beyond those services. Finally, a finding emerged that the metrics for defining success for an OTCC student did not align with the expectations of the chancellor's office. When asked about their success, all five student interview participants referred to their current academic performance that semester, their social/emotional well-being, or their overall college experience. When further asked about metrics of success and graduation, many students expressed ambiguity in their responses regarding what constitutes graduation and program completion. This finding was further substantiated given that only 84.6% of respondents indicated on the survey that they intended to complete a goal that meets the chancellor's office's definition of success.

The literature contends that easy access to support services (Hart, 2019) and an understanding of their role as community college students (Karp & Bork, 2014) can have profound impacts on student outcomes. As a result of the needs assessment, the author identified a need to explore how college personnel could promote available services as well as establish a campus culture that promoted student completion. By developing a shared response into the

issues raised by the research questions, OTCC could create systems of support that better meet the needs and goals of students as well as the goals put forth by the chancellor's office. These findings informed the planning of an intervention study that targeted community college students to increase their knowledge of available support services, program completion requirements, and how the college and chancellor's office define student success.

## Theoretical Frameworks

In exploring interventions to address the problem of low completion rates, it seemed prudent to explore frameworks that addressed organizational outcomes as well as frameworks that the intervention itself could be grounded in. From an institutional perspective, Miles' (1965) framework of organizational health was relevant in considering planned change and improvement. Miles (1965) defined organizational health as "the school system's ability not only to function effectively, but to develop and grow into a more fully-functioning system" (p. 12). Miles developed ten dimensions of organizational health that he argued are not mutually exclusive, yet interact with each other within any organization: goal focus, communication adequacy, optimal power equalization, resource utilization, cohesiveness, morale, innovativeness, autonomy, adaptation, and problem-solving adequacy. Based on the needs assessment findings, the author determined that OTCC may benefit from paying particular attention to goal focus, communication adequacy, and innovativeness.

Beyond the organization's health, given the need for a student-centered intervention bolstered by student participation and reflection, utilizing a situated learning (Lave & Wenger, 1991) approach allowed students to actively participate in the organization's outcomes. Lave and Wenger (1991) introduced situated learning theory as a way to explore the relationship between learning and the social situation in which it occurs. The authors contended that learning must

occur in an *authentic context*, or the context in which the knowledge is applied (Lave & Wenger, 1991). Further, through *legitimate peripheral participation*, or the process by which learners become ingrained in a community and become a full participant in a sociocultural practice, learners are able to co-construct knowledge that is situated in a specific context (Lave & Wenger, 1991).

## Interventions Explored

The review of intervention literature focused on campus culture and strategic advising practices; college know-how and the effectiveness of student success courses and goal development strategies; and interventions that leveraged technology were considered within the context of the organization's health while exploring how to incorporate situated learning components into a digital intervention. Overall, the review of the research literature highlighted strategic advising strategies (Smith & Allen, 2006) and methods to leverage technology (Mayer et al., 2019) to reach the largest number of students while providing accurate and helpful information. By contributing to students' understanding of their educational options and promoting college services that are already in existence, OTCC can foster a college culture that encourages student success and program completion.

Based on the needs assessment study results, the author suggested that OTCC should address the lack of understanding regarding program completion requirements, the notion that seeking out support services can be challenging and inconvenient, and the disparity in students' perspectives on success versus the institution and the chancellor's office. While OTCC currently offers new student orientation as well as a variety of student success courses, both are optional, and their lasting impacts are unknown. In order to promote organizational health within OTCC and meet the metrics of the Student Centered Funding Formula, OTCC must demonstrate

increased rates of program completion. As such, for the purposes of this intervention, the researcher was interested in exploring how to leverage technology beyond academic counselors' offices and into classrooms in an effort to reach the greatest number of students. In considering the theoretical frameworks guiding this intervention, it was important to consider the qualities of situated learning in relation to a digital student success intervention. Further, from an organizational health perspective (Miles, 1965), it is advantageous for OTCC to meet the needs of its current students and to promote its goal focus through increased communication and innovation. Specifically, the author identified an opportunity to create a virtual learning environment as described by Waldner et al. (2011) to offer on-demand video modules on a range of advising topics such as program completion, registration processes, and transfer requirements.

Importantly, the video modules would not replace the critical role that academic counselors play at OTCC, but would rather support student success as an advising-as-teaching method, as described by Kalamkarian and Karp (2015). To incorporate components of situated learning theory, not only would students be learning the information in the context of the college, but the video modules would demonstrate modeling of various tools such as degree audits and course registration. Between the informational video modules and reference to relevant support services at the college, this intervention had the potential to increase student knowledge regarding program requirements, explain how student success is defined at the community college, demonstrate how to access available support services, and ultimately increase OTCC student completion rates.

## Intervention Study

The purpose of this study was to determine the extent to which participation in an informational video module program affected student knowledge regarding program completion

requirements, available support services, and the ways in which student success is defined at the college level. Additionally, the study assessed if the digital format of delivery was relevant and helpful to students to determine widespread usability. The research study explored five research questions, which addressed both process and outcome evaluation components:

RQ1. To what extent was the program implemented as designed?

RQ2. In what ways do the contents of the video modules effectively align with and coordinate with related agencies and services?

RQ3. How do participants describe their experience in the program?

RQ4. In what ways did the video modules affect student understanding of program completion?

RQ5. In what ways did this intervention affect students' educational goals?

**Research Design**

The intervention followed a convergent parallel mixed methods design (Creswell & Plano-Clark, 2018) as the researcher intended to bring together the results of the quantitative and qualitative data analysis to be further compared and combined. This intervention utilized a form of pretest-posttest known as a retrospective pretest. In using a retrospective pretest, participants were asked at the end of each video module to rate their knowledge at the beginning of the video as well as their knowledge after completing the video. The retrospective pretests used in this study measured student knowledge, attitudes, and beliefs, and were primarily based on the New Student Orientation Assessment (NSOA; Sandoval-Lucero et al., 2017) with permission from the authors.

The video program was conducted from September to December 2020 and comprised three video presentations and three retrospective pretests during September, October, and

November, and two focus group interviews in December 2020. Participants rated their level of knowledge related to student success, program completion, and transfer requirements prior to and after viewing the videos and discussed ways in which this program contributed to their personal goal development.

**Data and Analysis**

Data collection took place from September to December 2020. Measures included quantitative and qualitative data from three retrospective pretests and qualitative focus group data.

**Retrospective pretests.** This intervention's retrospective pretests used a Likert-type scale with responses ranging from one to five, with five being 'completely knowledgeable' and one being 'completely unknowledgeable'. Each survey utilized a side-by-side format of a retrospective pretest to allow participants to objectively assess their knowledge and the effectiveness of the intervention. The open-ended questions were included as part of the retrospective pretests to gather qualitative data and to allow for immediate feedback from participants.

**Focus group interviews.** The two focus group interviews occurred in December 2020 and took approximately one hour each. The interviews were video and audio recorded via Zoom, which also produced complete transcripts for both interviews. The focus groups were conducted as semi-structured interviews and referenced the open-ended retrospective pretest questions. The focus group interviews also utilized questions from an interview protocol meant to examine how students defined success in college and the strategies they used to achieve success (Yazedjian, Toews, Sevin, & Purswell, 2008). The final interview protocol for this study comprised 11 questions and included items such as, "Did you feel the material covered in these videos was

relevant to you as a community college student? If so, why? If not, why not?"; "Which video topics were most relevant to you as a student?"; and "Did you access any services at the college as a result of watching these videos?".

## Findings

The findings of this study indicated that participant knowledge significantly increased across all three domains: support services ($p < .01$); certificate, degree, and transfer requirements ($p < .01$); and student success ($p < .01$). Participant feedback also indicated that the video modules helped them better understand where to find program-related information, motivated them to utilize the college's support services, and helped them develop a better understanding of how the college defines student success and how that relates to their own personal and educational goals. Qualitative data confirmed that the methods employed in the video modules such as voiceover narration, modeling of various online platforms, and providing direct contact information to referenced services was an effective and useful approach.

Importantly, student knowledge of program requirements is likely not enough to increase completion rates on its own. OTCC must continue to offer comprehensive counseling services to regularly update student education plans, discuss academic progress, and make appropriate referrals as needed to services such as tutoring, health services, and financial aid (Bahr, 2008). Participants' increased knowledge of available support services and how to access them is an important finding in this regard and when combined with their increased understanding of program requirements, it can then amount to a comprehensive approach for improving completion rates at OTCC and other community colleges.

## Chapter 1: Synthesis of Research Literature

Community colleges were first created during the 20th century to train the next generation of workers to operate the country's fast-growing industries (Cohen, Brawer, & Kisker, 2014). Since the opening of the first community college, community colleges have served as affordable and open-access institutions of higher education to meet the multitude of educational goals of students (Boggs, 2011). For the purposes of this dissertation, community colleges are defined based on their characteristics within the US: open-access, affordable, two-year colleges that serve as a pathway to a four-year university or can provide an associate degree or workforce-related certificate (Department of Homeland Security, 2012). California community colleges require a high school diploma, high school equivalency such as the general education development test (GED), or that students are at least 18 years old in order to enroll (California Department of Education, 2018). Additionally, there are currently 15 community colleges in California that award bachelor's degrees as part of a pilot program in conjunction with the California community college chancellor's office, but for the purposes of this dissertation, the traditional model of community colleges that offer associate degrees as their terminal degree are examined (California Community College Chancellor's Office, 2019).

While the perception of the value of a college credential has ebbed and flowed throughout time, there remains a broadly held belief that individuals with more years of education will be afforded higher levels of human capital, and therefore experience more and better opportunities economically, socially, and politically (Bowen et al., 2009). Specifically, completing a college degree is associated with these higher levels of human capital as opposed to students who enroll in college, but never complete a program (Bowen et al., 2009). As such,

community colleges and policymakers most frequently define and measure student success as the completion of a degree or certificate, and/or transfer to a four-year university (Oh & Kim, 2015).

According to the Bureau of Labor Statistics (2019), the minimum education required for 3.8% of jobs is an associate degree, while 17.9% of jobs require at least a bachelor's degree. While job opportunities readily present themselves for individuals with little to no education, unemployment rates for individuals over the age of 25 with less than a high school diploma were measured at 5.4% as of April 2019, whereas unemployment rates for individuals of the same age with a bachelor's degree were measured at 2.1% (Bureau of Labor Statistics, 2019). Furthermore, the median annual wages in the United States based on educational attainment as of 2019 were $36,100 for individuals with a high school diploma, $37,670 for individuals with a postsecondary nondegree award such as a certificate, $52,830 for individuals with an associate degree, and $72,830 for individuals with a bachelor's degree (Bureau of Labor Statistics, 2019). Based on the national data, obtaining a higher education credential, ideally a degree, provides increased personal and professional opportunities as well as the likelihood of being able to earn a living wage (Bureau of Labor Statistics, 2019).

Community college students come from increasingly diverse backgrounds and often face barriers such as first-generation to attend college, English language learners, full-time and part-time work obligations, family responsibilities, and low socioeconomic status (SES; Porchea et al., 2010). Given these challenges that many community college students face, they often feel a sense of accomplishment from milestones such as completing one semester of classes, finishing their general education requirements, or earning a job based on the skills they developed through their classes (Boggs, 2011). However, none of these accomplishments are recognized by the chancellor's office metrics of student success (California Community College Chancellor's

Office, 2019). Additionally, given the low completion rates for students who have been enrolled in community college for six years, time to completion is also a critical factor in student success (Shapiro et al., 2016). While there is a wealth of research concerning student success and outcomes at the K-12 level and at four-year universities, community colleges remain relatively unexamined and there is a need to explore the barriers and contributing factors that impact community college student success (Martin, Galentino, & Townsend, 2014).

## Problem of Practice

Given the individual and societal benefits of earning a higher education credential, such as advancements across academic fields and increased rates of civic and political engagement, the decrease in educational attainment in the United States is cause for concern (Bowen et al., 2009). Community colleges in particular face low rates of student completion across the United States (Lohman & Dingerson, 2005). There are approximately 8.7 million students enrolled in community colleges nationally, and six years after initial enrollment only 39.2% of students had earned a college credential (National Student Clearinghouse, 2019). The three-year completion rate for community college students nationwide was 24% in 2000, and 20% in 2010, while the six-year completion rate of community college students was 38% in 2007 (Bailey, 2017). There are several factors associated with community college student success, including race (Moore & Shulock, 2010), SES (Bowen et al., 2009), academic preparation (Davidson, 2015), institutional supports (Calcagno, Bailey, Jenkins, Kienzl, & Leinbach, 2008) and labor market demand for college credentials (Xu & Trimble, 2016). Students also face barriers within institutions such as unavailable courses needed for graduation (Gurantz, 2015), applying for and receiving financial aid (Hart, 2019), and lacking a sense of belonging on campus (Peaslee, 2018). By 2016-2017, the 2011-2012 California community college statewide student cohort had only achieved a 48.2%

completion rate (California Community College Chancellor's Office, 2019). Facing similar completion rates to the rest of California, the 2011-2012 cohort of students at Oak Tree Community College (OTCC) had achieved a 52.3% rate of completion by 2016-2017 (California Community College Chancellor's Office, 2019).

## Theoretical Framework

In exploring community college student completion, several theoretical frameworks were examined including Spady's (1970) undergraduate dropout process model; Tinto's (1975) institutional departure model; Pascarella's (1980) student-faculty informal contact model; Bean and Metzner's (1985) non-traditional undergraduate student attrition model; and Cabrera, Nora, and Castaneda's (1993) student retention integrated model, to name a few (Aljohani, 2016). Ultimately, Bean's (1982) student attrition model was deemed most relevant given his application of a causal model based on the idea that student attrition in higher education can be likened to employee turnover in workplace organizations. In reviewing the relevant literature, it can be argued that Bean's seminal work on student attrition is still relevant given the complexity of factors that contribute to college student attainment (e.g. Bowen et al., 2009; Nitecki, 2011; Shapiro et al., 2016).

Specifically, Bean (1982) presented a single model of student attrition that was synthesized from several other models such as Rootman's (1972) person-role fit model, Fishbein and Ajzen's (1975) importance of intentions in influencing behavior model, and his own student attrition model (1980). Bean (1982) posited that while the model cannot fully explain drop-out behavior at institutions nationally, it could measure a student's probability of drop-out given certain known factors and characteristics, such as those explored in this literature review. Bean (1980) also argued that not all attrition is bad and clarified that this model serves to examine the

determinants of attrition rather than exploring the pros and cons of dropout for individual students.

Bean's (1982) synthetic model of student attrition identified four categories of variables that have a direct or indirect impact on a student's intent to leave an institution and ultimately drop-out: background variables, organizational variables, environmental variables, and attitudinal and outcome variables (see Figure 1). Background variables were defined by parent education level, high school grades and achievement test scores, high school size, hometown size, distance from home, state residency, college preparatory curriculum, head of household's occupation, household income, and religion (Bean, 1982). As explored in this literature review, background characteristics such as high school grades (Davidson, 2015), academic preparation (Goldrick-Rab, 2010), and SES (Walpole, 2003) are still relevant determinants today. Bean argued that while background variables can indicate the types of barriers institutions may experience based on student characteristics, background variables commonly contribute little explanation to drop-out when organizational, attitudinal, and environmental factors are known. Bean (1982) also contended that the most important background variable was performance, which he defined as high school grades and ACT scores. While the following literature confirms that academic preparation and high school grades are often a predictive factor relating to student success, research conducted since the publication of Bean's student attrition model demonstrate that standardized test scores are not necessarily indicative of student outcomes (Bowen et al., 2009).

Organizational variables are a student's interaction with the organization and were defined as: regulation of life at school, repetitiveness of school, communication of policies, close friends, helpfulness of advisor, informal contact with faculty, grades, participation in decision

making, membership in campus organizations, curriculum and availability of preferred courses, housing, jobs, campus services used, peer culture, leisure activities, financial aid, discussed drop-out with outsides, and discussed drop-out with insiders (Bean, 1982). Bean clarified that organizational variables can be administratively controlled for, such as by requiring students to attend instructor office hours or increasing opportunities for students to contribute to institutional decision making. As presented in this literature review, organizational factors such as access to courses (Gurantz, 2015), relationships with faculty (Goldrick-Rab, 2010), and counseling services (Bahr, 2008) remain relevant factors today.

As opposed to organizational variables, environmental variables are factors that the institution has little or no control over. Bean defined environmental variables as: opportunity for transfer, opportunity for employment, family approval of the institution, family approval of the major, family responsibilities, likelihood of marrying, difficulty paying for school, military draft, economic indicators such as employment rates, and social fads. While most research focuses on which variables may push a student out of the institution, Bean (1982) likened environmental variables as factors that may pull a student from the institution, such as due to lack of family approval. While Bean acknowledged that difficulty to pay for college can be addressed by the organization, it is often due to family financial circumstances and accessibility and/or eligibility for federal aid. As such, environmental factors such as SES (Walpole, 2003), cultural capital (Bourdieu, 1977; Martin et al., 2014), and how program completion relates to opportunities for transfer and employment (Shapiro et al., 2016) are examined as part of this literature review.

Outcomes and attitudinal variables were defined as: practical value of the education, institutional quality, self-development, satisfaction, boredom, confidence, adjustment, certainty of choice, fairness of treatment, competitiveness of academic program, loyalty to the institution,

major certainty, occupational certainty, educational goals, and absenteeism (Bean, 1982). Lastly, according to Bean, variables for statistical control include age, ethnicity, year in school, full-time/part-time status, transfer/nontransfer, US citizenship, and sex. Bean hypothesized that student attitudes result in a significant relationship with intent to leave an institution. While Bean (1982) explained that it would be difficult for every attitudinal variable to prove significantly and simultaneously related to intent to leave, he suspected that attitudinal variables are stronger determinants than organizational or environmental factors. Similarly, studies reviewed as part of this chapter demonstrate that attitudes and beliefs can serve as important determinants of college student completion (e.g., David et al., 2015; Mercer, 2010).

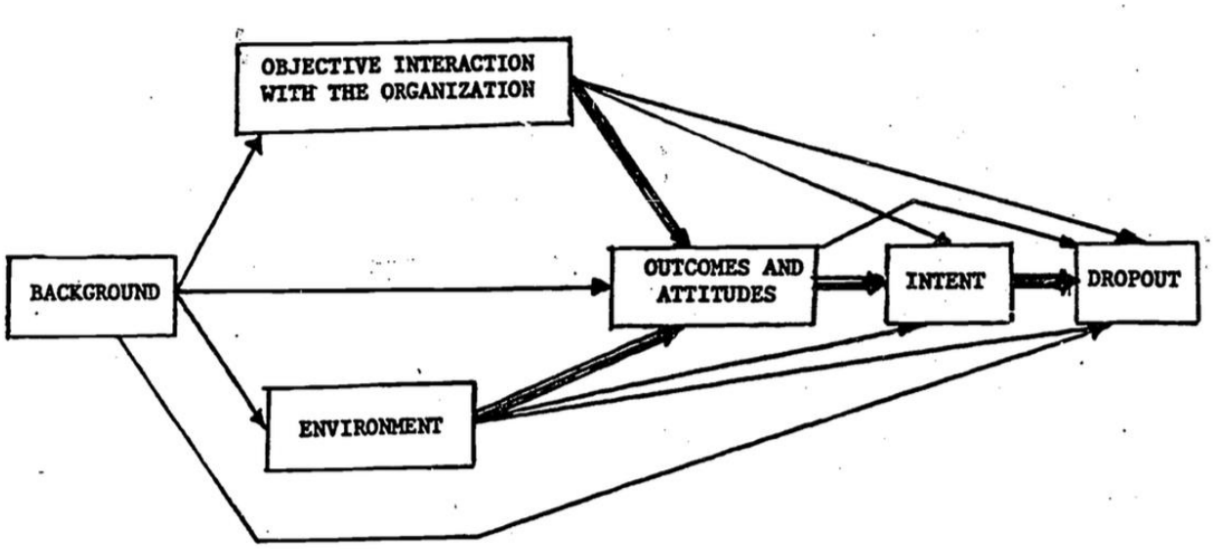



*Figure 1.* Student attrition model. From *Studying student attrition* by J.P Bean in E. T. Pascarella, 1982, p. 26. Copyright 1982 by Jossey-Bass. Reprinted with permission.

The student attrition model (Bean, 1982) allows for an inclusive and thorough examination of student success through the exploration of student background, objective interaction with the organization, environmental factors, and student attitudes and outcomes. Through the literature synthesis, beginning with background, factors such as race, gender,

academic preparation, and age are examined with regard to program completion and time to completion. Objective interaction with the organization includes institutional characteristics, access to courses, the role of faculty, the role of counselors, and financial aid. Environmental factors are considered specifically by exploring the definition of community college student success, community college funding models, SES, and cultural capital. Lastly, attitudes and beliefs are examined through student characteristics such as self-development, practical value of education, educational goals, and cultural capital.

## Synthesis of Factors Related to Community College Student Success

In this section, the author examines the contributing factors and reviews the relevant literature related to community college student completion. The factors are organized according to Bean's (1982) student attrition model beginning with background characteristics, then objective interaction with the organization factors, environmental factors, and finally attitudinal factors. The literature review concludes with a conceptual framework derived from the reviewed empirical research findings (see Figure 2).

### Background Factors

Bean (1982) defined student background characteristics through factors such as parental education level and occupation, high school academic performance, and high school curriculum. While community colleges offer open-access to all students, student demographics in the last decade demonstrate increased rates of being low-income, academically underprepared and in need of remedial courses, racial minorities, and older at the time of enrollment (Calcagno, Crosta, Bailey, & Jenkins, 2007; Goldrick-Rab, 2010). Despite Bean's (1982) argument that background characteristics provide little explanation for student drop-out, there remain noteworthy disparities in rates of success between race, gender, age, and academic preparation.

**Race.** In 2010, six years after initial enrollment, 70% of degree-seeking California community college students had not earned a certificate or degree and had not transferred to a four-year university (Moore & Shulock, 2010). Of those students, approximately 75% of Black students and 80% of Latino students had not completed a program of study or transferred (Moore & Shulock, 2010). By analyzing student record data from the California Community College Chancellor's Office Management Information System, Moore and Shulock (2010) tracked students enrolled in credit courses over a six-year period. By focusing on "degree seekers" (Moore & Shulock, 2010, p. 3), the authors calculated the percent of students who reached various milestones across racial/ethnic categories. Based on their findings, the authors concluded that Black and Latino students were less likely to reach milestones such as earning a degree and transferring than White and Asian-Pacific Islander students (Moore & Shulock, 2010).

Additionally, as part of their research, the authors found that labor market statistics from 2010 showed that community college students need to earn at least 30 credits to earn a significant economic benefit compared to non-college educated individuals (Moore & Shulock, 2010). According to the data, 40% of community college students had reached the 30-credit threshold six years after initial enrollment, but only 28% of Black students and 35% of Latino students had reached that same threshold (Moore & Shulock, 2010). When examining transfer data such as acceptance and enrollment rates in the California State University system, the University of California, and the National Student Clearinghouse, Latino students were half as likely as White students to transfer, 14% versus 29% respectively (Moore & Shulock, 2010).

Similarly, in studying 21 leading public universities in the United States using institutional records, Bowen et al. (2009) found that when considering parental education, income, race and gender, high school academic performance, and university characteristics such

as selectivity, students from racial minorities and low SES backgrounds had lower graduation rates and took longer to earn degrees. In addition to degree attainment, the authors also examined student behavior and decision making such as selecting a major, time-to-degree, and college grades. Using descriptive statistics, the authors found that when selecting a major, for example, Black students of both genders were more likely to major in the social sciences versus White students, while Hispanic students were even more likely than Black students to major in the social sciences (Bowen et al., 2009). Additionally, although the difference is small, White women were more likely than Black women to pursue majors such as education and communication studies (Bowen et al., 2009). Specifically, racial disparities of college completion can be described as:

> Thirty-six percent of white [*sic*] women earned a bachelor's degree by age 26 compared with 22 percent of black [*sic*] women and 13 percent of Hispanic women; just under 30 percent of white [*sic*] men earned a bachelor's degree compared with 11-12 percent of black [*sic*] and Hispanic men. (Bowen et al., 2009, p. 8)

Academic preparation is also closely linked to background characteristics such as race, gender, and age (Davidson, 2015; Goldrick-Rab, 2010). While their findings (Davidson, 2015; Goldrick-Rab, 2010) are discussed later in this section, considering the academic opportunities and preparation awarded to students of varying races is an important consideration when looking at college completion as a whole. In addition to the racial disparities in degree attainment at both the two-year (Moore & Shulock, 2010) and the four-year level (Bowen et al., 2009), gender also serves as a contributing factor to student outcomes (Conger & Long, 2010).

**Gender.** Historically, men vastly outnumbered women in terms of college enrollment and completion (Goldin, Katz, & Kuziemko, 2006). However, more recently, enrollment and

completion rates have reversed between the two genders in addition to changes in labor market expectations and social norms (Goldin et al., 2006). Marriage prospects have also shifted as female professional and personal outcomes increase with higher education (Goldin et al., 2006). In their study examining the catch-up and reversal of the gender gap in college attendance and graduation, the authors used three longitudinal data sets of high school graduates in 1957, 1972, and 1992 to conduct econometric analyses of college outcomes (Goldin et al., 2006). Using census data such as parental income, mother's education, race, and ethnicity coupled with institutional administrative data such as high school rank, standardized test scores, high school courses, and college graduation data, the authors created a regression framework to separate the role of each proximate determinant to see how changes in these characteristics explain the college gender gap (Goldin et al., 2006). Contributing to the narrowing of the gender gap were high school girls' relative improvement compared to high school boys' in both achievement tests and math and science course taking (Goldin et al., 2006). The authors proposed two key sources of the college gender gap reversal: increased economic benefits for college-educated females and the increased effort costs of college-going and preparation for males (Goldin et al., 2006).

In terms of economic benefits for women, the authors determined that college wage premium is actually higher for women than men (Goldin et al., 2006). Additionally, the rise in divorce rates since the 1960s and women's increased economic responsibility for children created incentives for women to invest in their own human capital via higher education (Goldin et al., 2006). The authors also found that women had lower effort costs in terms of college preparation and attendance compared to men. For instance, girls have exceeded boys in secondary school attainment through most of the last century and spend far more hours studying and doing homework (Goldin et al., 2006). Further, boys demonstrate higher rates of behavioral

problems and school disciplinary action, criminal activity, and have two to three times the rate of Attention Deficit Hyperactivity Disorder (ADHD) than girls. When controlling for these noncognitive behavioral factors, the authors argued it virtually explained the entire female advantage in college attendance for the high school class of 1992 (Goldin et al., 2006).

In addition to the shift and gap in college attendance, data from colleges in Florida and Texas illuminate the widening achievement gap between men and women. Using administrative data on enrollees in Florida and Texas four-year institutions, Conger and Long (2010) aimed to determine the role that background characteristics contributed to gender differences in achievement in terms of GPA, college credits, and persistence. By examining high school and college transcripts, high school test scores, demographic information, and limited data on employment while in college, the authors estimated a series of regressions of gender gaps in college outcomes (Conger & Long, 2010). The authors concluded that men earn less credits and achieve lower GPAs during their first semester in college in large part due to academic unpreparedness. The gap between GPA and credits earned continues to widen between men and women as they stay enrolled (Conger & Long, 2010).

Aligning with Goldin et al.'s (2006) findings on noncognitive factors, Conger and Long (2010) found that in addition to academic preparation, differences in non-cognitive abilities such as organization and motivation served as a driving factor in the differences in success between genders. For instance, data showed that women often express greater levels of motivation to succeed in college due to inequities in the job market and increased professional stability based on the value of a college degree (Conger & Long, 2010). However, despite the importance of other background characteristics and non-cognitive abilities, the authors concluded that what single-handedly reduces gender achievement gaps are high school performance and academic

preparation (Conger & Long, 2010). Specifically, females outperform males in terms of high school grades and class ranks and these rankings are more predictive of credits and college GPA than any other variable examined by the authors, including achievement test scores (Conger & Long, 2010). These findings align with Goldin et al.'s (2006) results pertaining to females' improvements in achievement tests and course taking. Given the findings regarding high school grades (Goldin et al., 2006) and class rank (Conger & Long, 2010) on student outcomes, the author will next explore the role of academic preparation as it relates to college student success.

**Academic preparation.** Academic preparation and high school grades are an important predictor of college success (Bowen et al., 2009; Davidson, 2015). While high school grades provide statistically significant correlations to college graduation likelihood, some studies determine that standardized tests such as the SAT and ACT result in minimal correlation to college graduation (Bowen et al., 2009). For example, in their examination of institutional records from 52 US universities, Bowen et al. (2009) found through coefficients from regressions used to predict graduation rates that the coefficients for SAT/ACT scores were always less than $\beta = 0.02$, whereas high school GPA was a statistically significant determinant of college graduation. Additionally, Bowen et al. (2009) found that high school GPA was positively and consistently associated with six-year college graduation rates regardless of the type of high school attended. Given these findings across studies (Bowen et al., 2009; Conger & Long, 2010; Goldin et al., 2006), academic preparation is a particularly important factor when examining students from low SES backgrounds and disparities in high school quality.

Conversely, Goldrick-Rab (2010) concluded through her review of 300 studies on community college academic and policy research over the past 25 years that students from low SES backgrounds and racial minorities take fewer math and science classes while in high school,

attend schools with fewer resources, and are taught by less qualified teachers, which in turn negatively impact their academic preparation and success in community college (Goldrick-Rab, 2010). Goldrick-Rab's (2010) literature review included studies that were identified through combinations of keywords such as, "community college students, 2-year student, degree completion, persistence, momentum, and barriers" (p. 440) as well as major nonprofit organizations that conduct research on community colleges such as MDRC, RAND, and the Lumina Foundation. Sources examined in Goldrick-Rab's (2010) review dealt with independent data sets, "used quantitative or qualitative methods that could rigorously address the research questions" (p. 441) and "quantitative studies needed to produce findings that could reasonably be generalized beyond the sample to the larger population of community college students" (p. 441). Specifically, Goldrick-Rab (2010) utilized a multilevel conceptual model to explore the "macro-level opportunity structure; institutional policies; and the social, economic, and academic attributes students bring to college" (p. 441). Additionally, in terms of academic success once enrolled in community college, Goldrick-Rab (2010) determined based on their review that students are often unaware of the academic demands and requirements once enrolled in community college, which is particularly evident among economically disadvantaged, first-generation, and racial minority students (Moore & Shulock, 2010). Aligning with Moore and Shulock's findings, awareness of academic demands, requirements, and opportunities can substantially affect completion rates and overall student success (Goldrick-Rab, 2010).

Related to college student academic preparation, another study examined leading indicators, or "academic behaviors that increase a student's chances of completion, but are not strictly required in order to finish an academic program" (Offenstein & Shulock, 2010, p. 6). In a study with associate degree- and transfer-seeking students ($N$ = 4,764) at Kentucky's two-year

public institutions, Davidson (2015) conducted logistic regression analyses of groups based on student characteristics. Predictor variables considered in the study included; underrepresented minority, low-income, underprepared, male, 30 credits earned in the first year of enrollment, passed a summer course, passed a college-level math course in two years, passed a college-level English course in two years, declared a major after first semester, continuous enrollment, and passed 100% of classes in first term (Davidson, 2015). Through their analysis, Davidson (2015) found academic preparedness to be a critical contributing factor to community college completion and was primarily measured through the form of earning 30 credits in the first year of study. However, academically underprepared students often struggle to earn 30 units in their first year due to either failing classes or being required to enroll in remedial courses that do not earn degree-applicable units (Davidson, 2015). These findings align with those of Goldrick-Rab (2010) and Moore and Shulock (2010) regarding academic preparation and students' ability, or lack thereof, to make progress toward degree completion and university transfer. A final background characteristic associated with program completion is student age.

**Age.** Community college students range in age as opposed to more homogenous age groups found at four-year institutions (Calcagno et al., 2007). Using a single-risk discrete-time hazard model with transcript data on a cohort of first-time community college students in Florida, Calcagno et al. (2007) compared the educational outcomes of older ($n$ = 5,652) and traditional age students ($n$ = 29,421). Older students in community colleges, between the ages of 25 and 64, experience a decreased number of years to benefit from a college education (Calcagno et al., 2007). The authors concluded that, on average, traditional age students are more likely to graduate than older students within 17 academic terms (Calcagno et al., 2007). Further, the authors' findings suggest that older adults graduate from community colleges at lower rates not

because they are older, but because they often lack the necessary academic skills, which is likely a result of being removed from formal education for an extended period of time (Calcagno et al., 2007). While older adult students place into remedial courses at similar rates of traditional age students, they tend to bypass their placement suggestions and enroll in remedial courses at lower rates (Calcagno et al., 2007). However, older adult students who enroll in remedial courses demonstrate decreased likelihood of graduating because the remedial courses do not contribute degree-applicable credits (Calcagno, et al., 2007). Additionally, part time enrollment status is associated with lower rates of completion when compared to full time enrollment (Calcagno, et al., 2007). Interestingly, Calcagno et al. (2007) determined that when math placement is controlled for, older adults were actually more likely to complete a community college credential, arguing that older returning students are often not deficient in their math skills, but simply need to be reintroduced to the material. The authors concluded that when controlling for cognitive mathematics ability, older students in Florida are actually more likely to graduate from community college than traditional age students (Calcagno et al., 2017). Moreover, Calcagno et al. (2007) argued that their findings are supported by testimonials that older community college students often display positive characteristics such as; a clear sense of their educational goal, increased skills when navigating higher education bureaucracies such as financial aid, and are often less apprehensive to seek out support services when compared to their traditional aged counterparts.

Older adult students, however, face additional challenges when pursuing higher education such as potentially forgoing employment opportunities and facing increased personal and familial obligations (Leppel, 2002). In a study on the similarities and differences in the college persistence of men and women, Leppel (2002) drew upon data from the 1990 survey of

Beginning Postsecondary Students (BPS) that was conducted by the National Center for Education Statistics (NCES). The survey presented data on students who began taking courses towards a bachelor's degree during the 1989-1990 academic year and comprised 2,647 men and 2,737 women (Leppel, 2002). Employing least squares regression analyses, the author explored variables including but not limited to persistence rates, race, marital status, children, income, GPA, and age (Leppel, 2002). In specifically examining the variable of age, Leppel (2002) found that being older lowered the predicted persistence rates of both men and women, and it lowered the rate more for men than women. The author concluded this was likely due to the increased rate of older adult students maintaining employment while pursing higher education and enrolling part time, leading to decreased course loads and increased time to completion (Leppel, 2002). Interestingly, during the 2018-2019 academic year, more than 21% of California community college students were 30 years old or older and had an average retention rate of approximately 87% (California Community College Chancellor's Office, 2019). This retention rate was higher than traditional age students' retention rate, implying that Leppel's (2002) findings on age and retention may not be relevant today. However, older students who pursue a degree or certificate for a specific salary increase or job promotion may be highly motivated to complete their program of study (Leppel, 2002), which is supported by the high persistence rates of older students in California (California Community College Chancellor's Office, 2019). Finally, Leppel (2002) found through BPS survey questions regarding student involvement in certain college activities that persistence was higher for both men and women who were integrated into the college experience and had positive interactions with the institution. Based on the research regarding community college student age and completion, both Calcagno et al.

(2017) and Leppel (2002) demonstrated that older student populations are not necessarily the cause of low completion rates.

While Bean (1982) included background characteristics such as hometown size, college distance from home, and state residence, other background characteristics such as race, gender, age, and academic preparation are important factors when exploring community college student completion. For example, there are clear racial disparities in student completion (Moore & Shulock, 2010), which are also closely related to students' understanding of college demands, requirements, and overall academic preparation (Goldrick-Rab, 2010). Consequently, academic preparation remains relevant even for older adult students and data show that interventions such as remedial courses may actually decrease completion among certain age groups (Calcagno et al., 2017). Finally, there remain achievement disparities between males and females which are not only closely related to academic preparation and achievement (Conger & Long, 2010; Davidson, 2015), but also noncognitive factors such as motivation, organization, and behavior (Goldin et al., 2006). While background characteristics such as race and gender cannot be altered, it is helpful to explore how other components of Bean's (1982) student attrition model, such as student interactions with the organization, can both promote and impede community college student completion.

**Student Interactions with the Organization**

Bean (1982) categorized organizational variables based on a student's interaction with the organization. These organizational interactions include but are not limited to the regulation of life at school, communication of policies, helpfulness of advisors, informal contact with faculty, grades, curriculum and availability of preferred courses, campus services used, peer culture, and financial aid (Bean, 1982). Community colleges have implemented institutional practices in an

effort to combat student attrition and increase success rates. These practices include bolstered student support services, restructured assessment testing, ongoing professional development opportunities, and increased efforts to foster a welcoming and collaborative learning environment (Nitecki, 2011).

In their study on which institutional characteristics contribute to community college student success, Calcagno et al. (2008) found that there was a negative relationship between large institutional size, proportion of part-time faculty, and minority students on student outcomes. The authors used data from the National Education Longitudinal Study of 1988 (NELS:88) for student and enrollment data such as transcripts, enrollment patterns such as the type and number of institutions attended, and credentials earned (Calcagno et al., 2008). Additionally, the authors utilized data from the Integrated Postsecondary Education Data System (IPEDS) from every school year of NELS:88 for institutional variables such as student characteristics, faculty, enrollment, and college finances (Calcagno et al., 2008). The authors examined data of 2,196 students across 536 community colleges in the United States and conducted regression analyses using both a binary outcomes model as well as a continuous model to measure student success (Calcagno et al., 2008). As a result, the authors determined that the size of institutions is associated with student success outcomes. Students enrolled in medium-sized community colleges (1,001 to 5,000 full-time equivalency students) are less likely to demonstrate completion than students at small institutions with fewer than 1,000 students (Calcagno et al., 2008). Additionally, the authors found that institutions with large populations of adjunct faculty and/or institutions with large populations of racial and ethnic minority students demonstrated lower rates of student completion (Calcagno et al., 2008). By examining student characteristics as part of the NELS:88 data such as high school records, family income, parental

occupation, and parental education, the authors concluded that while institutional characteristics have impacts on student completion, they do not appear to be a greater determinant than individual characteristics (Calcagno et al., 2008).

As Calcagno et al. (2008) found in their research, large institutions demonstrate lower rates of student success than smaller colleges. This can in part be attributed to the fact that community college students also enroll for personal interest and skill development with no intention of completing a program of study (Nitecki, 2011). Students and faculty, however, also cite bureaucratic barriers that often occur as institutional size increases (Nitecki, 2011). In a qualitative case study at one urban community college in the northeastern US, Nitecki (2011) explored the factors contributing to the college's struggle with retention. Nitecki (2011) found barriers that included long wait times to receive services such as financial aid and academic advising, as well as support services being disconnected and operating independently across campuses, forcing students to seek out support through multiple locations rather than one comprehensive service. The author closely examined two programs at the study site that demonstrated higher than average completion rates compared to the rest of the college and had reputations for supporting their students (Nitecki, 2011). After conducting faculty interviews ($n$ = 13), student interviews ($n$ = 21), classroom observations ($n$ = 14), and document analysis, Nitecki (2011) concluded that college bureaucracy, low levels of institutional commitment among students, and varying levels of student academic preparation led to increased rates of student attrition. However, characteristics such as increased involvement from faculty on collegewide committees as well as in their work with students coupled with unique program cultures that reflect their respective professions encouraged retention, graduation, transfer, and student success (Nitecki, 2011). While Nitecki (2011) examined more program specific

practices, Calcagno et al.'s (2008) findings regarding large size and large numbers of adjunct faculty align with Nitecki's findings that increased faculty involvement and more individual student support can lead to increased program completion. Another factor that relates to students completing their programs of study is their ability to enroll in necessary courses.

**Access to courses.** Community college students are responsible for enrolling in their courses and are often awarded a registration date and time that is determined by the number of units earned and their academic standing (Gurantz, 2015). These systems of priority registration often leave students who have earned less units or who are on academic probation with few course options they are interested in, that meet degree requirements, and that align with their schedules (Gurantz, 2015). Due to overcrowding and registration priority, there is a problem of course scarcity and California community college students are twice as likely as the national average to be unable to enroll in necessary courses (Pearson Foundation, 2011). While studying the relationship between registration processes, course availability, and student transfer timelines at one large community college in California, Gurantz (2015) examined student record data ($N$ = 24,666) during the fall semester of the 2011-2012 academic year including transcripts, demographics, assigned registration times, and a detailed history of every registration attempt. By performing multiple regressions and constructing linear probability models that regressed demographic, academic, and previous registration characteristics, the author concluded that "overcrowded" (Gurantz, 2015, p. 548) courses are present in community colleges and may force students to join waitlists or explore other course options altogether. However, delayed decision-making and registration on the part of students proved to be a statistically significant ($p < 0.01$) contributor to not being able to enroll in desired courses (Gurantz, 2015). As such, Gurantz (2015) contends that community colleges must increase their efforts to educate students on

college procedures and policies and emphasize the importance of every student completing matriculation steps such as placement tests, orientation, and meeting with an academic counselor. Furthermore, course scarcity and the inability to enroll in courses required for a degree or for transfer is a direct contributor to time to completion (Gurantz, 2015).

In addition to course scarcity, there is increasing demand from students for online course offerings to better accommodate work schedules and as a viable option for students outside their college's geographic area (Benson et al., 2005). Using student data ($N$ = 45,557) from 30 community colleges in New York, Shea and Bidjerano (2018) explored the threshold for success in online course enrollment. By applying both single and multilevel analysis, data suggested that if more than approximately 40% of a student's course load is comprised of online classes, the likelihood of degree completion decreases (Shea & Bidjerano, 2018). The authors asserted that community college students should be advised to take a majority of face-to-face courses supplemented by one or two online courses to increase their likelihood of degree completion (Shea & Bidjerano, 2018). Although Shea and Bidjerano (2018) and Gurantz (2015) examined two different issues relating to access to courses, both studies presented results that imply students are having negative interactions with organizations due to both course scarcity and format preferences. While there remain challenges in accessing courses such as overcrowding, priority registration models, and online versus face-to-face preferences (Shea & Bidjerano, 2018), the primary cause of students failing to enroll in their necessary and desired courses is due to registering late (Gurantz, 2015).

**Faculty.** Faculty members' role and working conditions have been correlated with student outcomes. Community colleges in particular often rely heavily on adjunct faculty members, or part-time non tenure-track instructors (Goldrick-Rab, 2010). The data regarding the

effectiveness of adjunct faculty is mixed however; some studies show negative effects on student completion, some show positive effects as described in the literature review of 300 studies (Goldrick-Rab, 2010), and others show no effect (Yu, Campbell, & Mendoza, 2015). In the Yu et al. (2015) study using institutional data ($n$ = 50) from IPEDS and student ($n$ = 1,940) variables from BPS, the researchers applied a multilevel logistic regression to explore whether the proportion of adjunct faculty negatively impacted the likelihood of program completion. The findings revealed nonsignificant association between students' likelihood of completion and an institution employing a higher percentage of adjunct faculty. The authors attributed this to the fact that a large percentage of adjunct faculty come directly from professional fields and have practical skills and knowledge which benefit community college students (Yu et al., 2015).

Additionally, compared to four-year university professors who are supported by their institutions for activities other than teaching such as research, both full-time and adjunct community college instructors often do not receive the same level of support to pursue professional development and update their skills (Goldrick-Rab, 2010). Resources and support for community college professional development, for example, have even decreased in California as budget constraints increase (California Community College Chancellor's Office, 2018). Further, there is a shortage of qualified faculty applicants in many impacted fields of study including allied health and science, technology, engineering, and mathematics (STEM) majors, which contribute to limited course offerings to students and increased turnover in faculty who leave institutions for better job opportunities (Goldrick-Rab, 2010).

In addition to employing well-qualified and an adequate number of faculty, students feeling supported and welcomed by faculty is a factor shown to be related to student success and persistence. Through their exploratory quantitative study, Peaslee (2018) assessed whether there

is a relationship between faculty confirmation behaviors and student academic self-efficacy. Specifically, Peaslee characterized confirmation behaviors as, "how the faculty member responds to questions, the faculty members' interests in how students are learning within the class, and how the faculty member teaches" (p. 637). Employing a causal comparative matched pair design with first-semester Midwestern community college students ($N$ =70), the author employed the Self-Efficacy for Learning and Performance scale of the Motivated Strategies for Learning Questionnaire as well as the Perceived Teacher Confirmation Scale (Peaslee, 2018). Through matched pairs testing and inter-item correlations, Peaslee (2018) revealed the importance of faculty confirmation especially for first-generation college students ($p$ = .016). Additionally, the author reported a statistically significant ($p$ = .021) relationship between faculty confirmation and change in self-efficacy among females, but not males (Peaslee, 2018). The author compared self-efficacy to motivation and described it as being on a continuum that is constantly impacted by the views of success or failure in a given situation. For example, Peaslee purported that students with sufficient levels of academic self-efficacy are able to conceive of new approaches when faced with a challenge. Peaslee (2018) contended that community college faculty should invest instructional time in communicating to students that they are valued and as a result, students will be more engaged with peers as well as course content. In addition to positive relationships with instructors, counselors also play an important role in students' interactions with the college.

**Counseling.** Data show that all students benefit from academic counseling support, particularly academically underprepared students (Bahr, 2008). In their 1995 study, Bahr (2008) employed hierarchical discrete-time event history analysis of students ($N$ = 190,177) from fall 1995. Using the first-time freshman, or first-time college enrollee, cohort at 107 California

community colleges, Bahr (2008) explored the effect academic counseling had on student attainment. Through the examination of academic records and student characteristics such as academic preparation and race, Bahr (2008) contended that academic counseling did not contribute to student attrition and in fact, counseling was particularly beneficial for academically underprepared students. Additionally, students of all racial and ethnic backgrounds demonstrated positive effects from academic counseling (Bahr, 2008).

However, many students report feeling rushed when meeting with a counselor and that counselors have a limited amount of time with them, which can lead to misunderstandings and confusion regarding degree requirements (Hart, 2019). Through in-depth, semi-structured interviews with 45 California community college students, Hart (2019) found that students received conflicting or incorrect information from different academic counselors within the same institution, which may contribute to time to completion or failure to complete a program. Additionally, participants in Hart's (2019) study reported that counselors were only able to provide curricular advice as opposed to information about majors, careers, and transfer experiences. Despite feeling rushed and receiving potentially inaccurate information however, students identify counseling functions as important to their success and students look to counselors for support in drawing connections between their academic, career, and life goals and their program of study (Allen, Smith, & Muehleck, 2013).

In a study of pre-transfer students ($n$ = 7,172) at two community colleges and post-transfer students ($n$ = 1,932) at four-year universities from those same community colleges, Allen et al. (2013) surveyed students about the importance of and their satisfaction with academic counseling services. The authors asked participants to rate the importance of 12 counseling functions, which included variables such as counselors' ability to help students

connect their academic, career, and personal interest; counselors' ability to make relevant referrals for both academic and nonacademic concerns; and the ability to give students accurate information about degree requirements (Allen et al., 2013). The results of simultaneous regression analyses showed that pre- and post-transfer students rated all 12 counseling functions as important, which supports the notion that counselors must be prepared and able to advise students on a comprehensive range of functions (Allen et al., 2013). As such, it is imperative for community colleges to employ an adequate number of counselors and provide ongoing professional development opportunities if they are to be tasked with supporting students' academic, social emotional, and career concerns (Allen et al., 2013; Bahr, 2008; Hart, 2019). Further, based on their benefits for academically underprepared students, students of all racial backgrounds (Bahr, 2008), and their ability to help students connect their academic and personal goals (Allen et al., 2013), counselors serve as an important and positive interaction between students and the organization. Another important institutional service closely tied to students' ability to attend community college is that of financial aid.

**Financial aid.** The cost of higher education and the process of applying for and receiving financial aid serves as a barrier to many community college students (Hillman & Orians, 2013). In their policy brief which drew upon state and federal financial aid policy, Hillman and Orians (2013) argued that effective models of financial aid are critical to support the needs of students and the original model of examining eligibility solely by need and merit is no longer the most effective practice. Specifically, the authors purported that financial aid programs should not only lower tuition through grants, but should "(1) provide students with clear information about how to apply for aid; (2) have simple eligibility criteria; (3) make early commitments to students; and (4) are [*sic*] well targeted to the state's policy goals" (Hillman & Orians, 2013, p. 353).

In addition to confusing information and eligibility criteria as discussed by Hillman and Orians (2013), another challenge of federal and state financial aid applies to students who do not qualify for aid based on their parents' income, regardless of whether or not their parents are helping to finance their education (Hart, 2019). Moreover, financial aid award packages depend on the number of units a student enrolls in; in order to receive the maximum amount of financial aid, students must be enrolled in a full-time course load, which often makes it challenging to work part- or full-time and manage personal and familial obligations (Hart, 2019). Community college students continue to face barriers that are less common among students at four-year institutions such as the need for childcare; housing, food, and transportation insecurity; and the need to be employed while in school (Hart, 2019). In addition to their coursework, students seeking financial aid are often tasked with navigating institutional and government bureaucracies such as the Department of Rehabilitation, Veteran's Affairs, and unemployment benefits (Hart, 2019). Students in the Hart (2019) study also cited navigating the financial aid office at their institution as a deterrent due to long waits and confusing or unhelpful information. In addition to challenges within the organization, there are environmental factors that impact student efforts as well as the institution's ability to support students.

This section of the literature review explored how student interactions with colleges in the form of accessing courses, interacting with faculty, counseling services, and financial aid play a part in community college student completion. While there are organizational characteristics associated with lower rates of college graduation such as increased size and increased populations of racial and ethnic minorities (Calcagno et al., 2008), interventions such as increased faculty involvement, supportive academic programs, and coordinated student services in a one-stop location may combat the aforementioned institutional barriers (Nitecki,

2011). Additionally, feeling supported and welcomed by faculty is an important factor that may lead to increased persistence and completion (Peaslee, 2018). Further, while there is room for improvement in some areas of organizational services, such as the accuracy and availability of counselors, providing students with access to faculty counselors can not only help to solidify their academic plan, but can also help them clarify their goals and purpose for attending college (Bahr, 2008; Hart, 2019). Based on the findings of the reviewed literature, Bean's (1982) contention that students' satisfaction with institutions increases their commitment to the institution and their likelihood of earning a degree likely still holds true today.

## Environmental Factors

Bean (1982) defined environmental factors as variables that institutions have little to no control over, such as SES, familial support, and likelihood of employment as a result of a college credential. Closely related to Bean's factors is Bourdieu's (1977) concept of cultural capital and the ways in which varying levels of cultural capital may impact students' success in college settings. In addition to Bean's identified variables, this dissertation also examines environmental factors such as policymakers' definition of student success and state-mandated funding formulas, which directly impact the financial stability of institutions (Mullin & Honeyman, 2007).

**Student success.** Completing an associate degree or certificate has become the defining metric of student success (California Community College Chancellor's Office, 2019). Contrary to many definitions, however, success is not necessarily linear and student success cannot be measured solely in quantifiable variables such as GPA and completion rates (O'Shea & Delahunty, 2018). In a study with first-generation college students across five Australian universities, O'Shea and Delahunty (2018) conducted 142 surveys and 21 interviews in their examination of how students perceive their success in higher education. By engaging in cross-

comparative analysis of emerging themes, the authors found that how students define success varies across a range of connotations often associated with personal circumstances and validation (O'Shea & Delahunty, 2018). As a result of their findings, the authors call upon institutions of higher education and policymakers to, for example, shift their metrics of student success in order to create real opportunities for students to achieve success in ways that are meaningful to them (O'Shea & Delahunty, 2018).

In addition to certificate and degree completion, time to completion is a critical metric in examining institutional success (Shapiro et al., 2016). Time to completion is defined as the time between initial enrollment and graduation (Shapiro et al., 2016). Using student-level data from the National Student Clearinghouse on students ($N$ = 2,047,696) who received their first associate or bachelor's degree between July 1, 2014 and June 30, 2015, Shapiro et al. (2016) measured time to degree with two metrics: the total time elapsed between initial enrollment and degree award data, and the total time of active enrollment. The authors identified several factors that contribute to increased time to completion, such as; lack of available institutional resources, increased tuition costs, remedial course requirements, enrolling in courses that are not required for degree completion, challenges enrolling in required courses, and outside obligations such as employment and family responsibilities (Shapiro et al., 2016).

As of 2014, community college students demonstrated only a 5% rate of on-time graduation within two years of initial enrollment (Shapiro et al., 2016). Interestingly, students who earned an associate degree first, took an average of eight years to graduate with a bachelor's degree whereas students who attended a two-year college but did not earn an associate degree took an average of five years to earn a bachelor's degree (Shapiro et al., 2016). As such, earning an associate degree may not be in the best interest of students who intend to earn a higher degree.

Similar to O'Shea and Delahunty (2018), Shapiro et al. (2016) call on policymakers to consider the changing profile of college students and to transition away from previously held definitions of normal and successful. In addition to labeling many students as failures based on their time to degree, many institutions are penalized via funding formulas for the increased times to degree that are often associated with nontraditional student populations (Shapiro et al., 2016). Rather than trying to fit all students into one mold, researchers call upon policymakers to acknowledge the reality of today's students in order to better support their success (O'Shea & Delahunty, 2018; Shapiro et al., 2016).

**Funding formulas.** Community colleges are funded through local, state, and federal government sources in addition to student-paid tuition (Mullin & Honeyman, 2007). To ensure an equitable distribution of funds to institutions, funding formulas have been created that often take into consideration several factors such as student demographics, enrollment numbers, and completion rates (California Community Colleges Chancellor's Office, 2018). Within the United States, community colleges operate either under a no funding formula, a responsive funding formula, or a functional component funding formula (Mullin & Honeyman, 2007). Responsive funding formulas require institutions to justify their requisite operating aid while simultaneously employing formulas to address funding disparities, changes in workload measures, or both (Mullin & Honeyman, 2007). Conversely, functional component funding requires states to justify their costs by categorizing components of operating costs. California community colleges, for example, operate under a functional funding formula by justifying their costs in subcategories such as instruction, student services, institutional supports, and plant operations (Mullin & Honeyman, 2007).

During the 2018-2019 academic year, California community colleges implemented the Student Centered Funding Formula (SCFF), which allocates funds to institutions based on enrollment, low-income students being served at the college, and student success outcomes measured by certificate and degree completion and/or transfer to a four-year university (California Community Colleges Chancellor's Office, 2018). While the California community college chancellor's office states that the purpose of the SCFF is to reduce equity gaps and strengthen the state's economy, early data suggest that as a result of the funding formula, institutions may guide students toward short-term certificates as opposed to associate degrees due to the decreased time to completion (Li & Kennedy, 2018). Using data from IPEDS, the authors created a panel dataset of 751 two-year colleges from 1990 to 2013 to conduct a series of analyses with college- and state-level control variables (Li & Kennedy, 2018). Results of the difference-in-differences analyses showed that, on average, performance funding models produce no significant changes in completion of medium-term certificates (between one and two years of study) and associate degrees, but that they do result in short-term certificate (less than one year of study) production (Li & Kennedy). Based on their findings, Li and Kennedy (2018) purport that performance funding models can be detrimental to students as community colleges focus their attention on short-term certificates and leave students with credentials that offer limited labor market benefits.

Other research supports the findings of Li and Kennedy (2018) that performance funding may affect college behaviors (Gill & Harrison, 2018). In their qualitative study comprised of 12 semi-structured interviews with student affairs administrators at ten different community colleges in Ohio, Gill and Harrison (2018) explored the impact of performance funding on administrators' work experiences. While the participants shared either neutral or positive views

on performance funding, the authors identified a need to examine student perspectives and experiences. The authors contend that students are often unaware of the policies that shape institutional practices, and as such, may not be aware of all of their educational options given that community colleges are highly incentivized to demonstrate program completion (Gill & Harrison, 2018). Additionally, as more performance funding models are implemented, it is important to examine their impacts over time to determine effectiveness as well as any downsides (Gill & Harrison, 2018; Li & Kennedy, 2018). In addition to colleges' funding sources, it is important to consider students' socioeconomic backgrounds and financial resources.

**Socioeconomic status.** Disadvantaged students, such as those from low socioeconomic backgrounds and racial minorities who earn lower grades than their non-disadvantaged counterparts, demonstrate increased time to completion, which not only increases the costs of education but also delays their entry into the workforce (Bowen et al., 2009). Additionally, disadvantaged students may face increased difficulties in the job market as well as in attempting to continue their education through graduate programs (Bowen et al., 2009). While some studies indicate program completion is influenced by the difficulty of a student's major, with regard to time to completion, major choice has essentially no impact on student outcomes, perhaps because the factors that influence drop-out and stop-out often occur early on and prior to major declaration (Bowen et al., 2009; Conger & Long, 2010).

Data consistently show that students with low SES are less likely to pursue higher education and are less likely to persist when they do enroll in college (Walpole, 2003). In a study using longitudinal data from the national study of college students, Walpole (2003) examined students' ($N$ = 12,376) activities, aspirations, and attainment from their first years in college through early adulthood across 209 American four-year universities. The author compared low

SES students and high SES students based on parental income, educational attainment, and occupational prestige (Walpole, 2003). Using multivariate analysis, the author determined that students from low SES backgrounds face barriers from an early age compared to their non-disadvantaged counterparts which include level of parental involvement, parental and community expectations, school experiences and expectations, and college costs and financial aid availability (Walpole, 2003). Family income level and overall SES is a primary driving force related to time to completion (Walpole, 2003).

Similar to Walpole's (2003) findings, Bowen et al. (2009) determined that even after controlling for parental education, students from families in the top income quartile demonstrated an increased likelihood of seven percentage points of on-time completion compared to students whose families are in the lowest income quartile. Additionally, while students from low SES backgrounds often gain upward mobility compared to their parents by pursuing higher education, they continue to experience fewer advantages than students from higher SES backgrounds (Walpole, 2003). Low SES students often display increased rates of selecting majors in professional-related fields, perhaps to increase the odds of making money immediately after finishing college (Bowen et al., 2009). While major choice shows minimal relation to student outcomes across SES, time to completion and academic performance are strongly correlated with SES (Bowen et al., 2009). Bowen et al. (2009) present these disparities of completion between SES levels as:

> Sixty-eight percent of students from families in the top income quartile with at least one parent having received a college degree earned a bachelor's degree by age 26 compared with just 9 percent of those from families in the bottom income quartile with neither parent having received a college degree. (p. 8)

Closely tied to SES is students' cultural capital and the educational access and experiences associated with higher levels of cultural capital.

**Cultural capital.** In the seminal work on cultural capital, Bourdieu (1977) posited that education and culture are inextricably linked and that education promotes the dominant culture while devaluing the lower-class culture. SES in particular impacts cultural capital as low income students often have less access to educational resources, extracurricular enrichment, and college preparation activities and resources, whereas middle- and upper-class students are often exposed to increased rates of cultural capital beginning at an early age (Martin et al., 2014). According to Bourdieu (1977), schools transmit to the dominant culture that directly contributes to societal and economic power. Additionally, a student's *habitus*, or way of thinking and practices, acquired from their family impacts their assimilation and reception in educational settings (Bourdieu, 1977). As such, many community college students are disadvantaged with regard to cultural capital due to barriers such as needing to be employed while in school and needing to support children and/or family members (Košutić, 2017).

In their examination of social inequalities in school achievement and educational decision-making, Košutić (2017) administered and analyzed surveys to determine the predictive power of cultural capital in the context of educational decisions among Croatian secondary students ($N$ = 534) across 18 schools. In measuring cultural capital and SES, the author surveyed participants on GPA; higher education aspirations; likelihood of continuing education at a university or vocational college; secondary school type; parents' cultural capital such as frequency of visiting museums and reading non-fiction books; parental education; family SES; and transfer of cultural capital through parental involvement (Košutić, 2017). Through sequential multiple regressions and logistic regressions, the author determined that cultural capital has a

statistically significant ($p < .01$) correlation with school performance. Further, Košutić (2017) determined that cultural capital and SES explain between 13% and 18% of variation in academic achievement, in addition to the type of school attended (gymnasium versus vocational). While the author acknowledged that student outcomes are often determined by their parents' social class, students with high levels of motivation and support from family and friends are able to break the cycle of low cultural capital (Košutić, 2017).

Similar to Košutić's (2017) findings, Noble and Davies (2009) found an association between cultural capital and higher education attendance and likelihood of drop-out. Using their own measure, the cultural capital questionnaire, the authors conducted a study at three institutions in England with 17 and 18 year old students ($N = 386$) preparing to attend university. Using logistic regressions and correlation analyses between variables, the authors found statistically significant ($p < .01$) correlations between cultural capital and intentions toward participation in higher education (Noble & Davies, 2009). For example, the authors found that cultural capital impacted student success even before initial enrollment as some students determined they do not fit in with higher education culture or that as a result of their low cultural capital, their barriers to accessing and succeeding in higher education were too challenging (Noble & Davies, 2009). Additionally, students with low cultural capital may make ill-informed decisions or fail to navigate the system of higher education at higher rates than their classmates who possess increased levels of cultural capital (Noble & Davies, 2009). While data confirmed that students with low levels of cultural capital were less likely to attend and complete college, there remains a need to research ways to combat and increase student cultural capital to address inequalities in educational attainment (Košutić, 2017; Noble & Davies, 2009).

Bourdieu's (1977) notion of habitus is embedded in the context of family in terms of the financial, cultural, and social resources provided. A student's habitus not only impacts their academic practices and achievement, but also how they perceive the value of education and their educational aspirations. As a result, high cultural capital can affect students' habitus and ultimately their academic achievement. However, while family economic and social support has been linked with increased academic success, one study determined that family financial support for low-income students did not play a role in student GPA, credit accumulation, or persistence whereas family emotional support had an impact on all three metrics (Roksa & Kinsley, 2019). In their study of first-year low-income students ($N$ = 728) at eight four-year institutions in Wisconsin, Roksa and Kinsley (2019) found that family emotional support plays an important role in student outcomes. Using data from the Wisconsin Financial Aid Study, the authors conducted transcript analysis as well as examined survey results relating to family support in terms of emotional and financial support (Roksa & Kinsley, 2019). Based on a series of logistic regression models, Roksa and Kinsley (2019) found that first-generation college students who typically possess relatively lower levels of cultural capital, benefited less from family financial support, but were more likely to earn higher GPAs and experience greater psycho-social adjustment and sense of belonging in college from family emotional support. As such, despite having limited cultural capital in terms of financial contributions, families that convey support of their children's educational pursuits play a crucial role in student success (Roksa & Kinsley, 2019). In addition to levels of cultural capital, student attitudes and beliefs serve as strong predictors of success, and given high levels of motivation and clearly defined goals, student attitudes can overcome low levels of cultural capital (Martin et al., 2014).

The environmental factors examined in this chapter included stakeholder definitions of student success, funding formulas, student SES, and cultural capital. While California clearly defines student success as completion of a degree or certificate and/or transfer to a four-year university, the research literature confirms that students view and define their success differently. Specifically, students consider their personal circumstances, goals, and validation (O'Shea & Delahunty, 2018; Shapiro et al., 2016). Additionally, California's funding formula that is based on the state's definition of student success may influence colleges' behaviors and result in less support of student exploration and personal validation (Gill & Harrison, 2018; Li & Kennedy, 2018). Similar to Bean's (1982) model, SES continues to be a contributing factor when looking at college enrollment and completion (Bowen et al., 2009). Students continue to face disparate educational experiences from a young age based on SES which can then lead to very different college aspirations and experiences (Walpole, 2003). Finally, Bourdieu's (1977) seminal work on cultural capital and education closely aligns with Bean's (1982) perspective regarding environmental factors. Similar to SES, cultural capital is significantly correlated with academic achievement (Košutić, 2017) and likelihood of completing college (Noble & Davies, 2009). While environmental factors are difficult, if not impossible, to control for when examining community college student success, Bean (1982) purported that even more important than environmental factors are student attitudes and beliefs.

**Attitudes and Beliefs**

Student attitudes and beliefs have been shown to serve as stronger determinants than institutional characteristics when it comes to college student success (Calcagno et al., 2008). For example, students with personal and financial barriers may struggle to succeed regardless of the supports available at their college (Calcagno et al., 2008). Meanwhile, several personal

characteristics have been associated with low rates of success; poor adjustment to college, a lack of social support, and financial and transportation issues (David et al., 2015). In their study on barriers to community college success in the form of persistence and GPA, David et al. (2015) surveyed 293 first-time freshmen at one US community college who enrolled in fall 2010 and persisted to spring 2011. The authors investigated types of barriers such as; poor college adjustment, lack of social support, negative experiences with college services, financial and transportation challenges, and technological difficulties (David et al., 2015). Using regression procedures, David et al. (2015) determined that students who did not persist to their second year of college experienced significantly ($p < .05$) higher rates of poor college adjustment and a lack of social support. Additionally, the authors found that poor college adjustment and negative experiences with college services were significantly ($p < .05$) related to lower GPAs (David et al., 2015). Based on these findings, it is important to consider how student attitudinal characteristics such as self-development, views on the practical value of education, and goal setting impact their outcomes.

**Self-development.** Bean (1982) identified self-development as a key factor related to attitudes and outcomes that lead to either college persistence or drop-out. Self-development is defined as the development of one's own capabilities or possibilities (Merriam-Webster, 2019), whereas Bean defined development as, "the degree to which a student believes that he/she is developing as a result of attending the IHE" (p. 159). In addition to the academic gains students can achieve by attending community college, there are benefits related to self-development that can be achieved as well, such as the ability to change aspects of themselves, opportunities for self-discovery, and an enhanced sense of confidence and self-esteem (Mercer, 2010). In their qualitative study of returning adult students ($N = 20$), Mercer (2010) found through semi-

structured interviews that fear of failure was a recurring theme related to students' self-development and academic success. Another theme was the concept of "re-negotiating the self" (Mercer, 2010, p. 28) wherein returning adult students not only discussed gaining new academic skills and knowledge in college, but also a greater sense of confidence, awareness, and a conscious desire for personal change. Despite feelings of anxiety and concerns regarding their academic ability, when interviewed at the end of their second year in college, the study participants identified as feeling more self-confident and had taken a greater sense of ownership in their learning (Mercer, 2010). The results of this study confirm there is a connection between academic progression and self-development as demonstrated through academic achievement as well as socially between peers, faculty, and professionals off campus (Mercer, 2010).

Similar to Mercer's (2010) findings regarding student confidence, another study found two types of catalysts that impacted community college student confidence, which were categorized as experiences of destabilization and experiences of earned success (Bickerstaff, Barragan, & Rucks-Ahidiana, 2017). Using data from a larger study, the authors examined 97 semi-structured interviews with community college students at three different institutions that had recently taken or were currently enrolled in a student success course (Bickerstaff et al., 2017). Through inductive thematic analysis, the authors identified academic confidence as a key construct and through a series of qualitative coding, the authors determined that community college students experience shifts in confidence when faced with aspects of college that are more challenging than expected (Bickerstaff et al., 2017). This, the authors determined, could be categorized as experiences of destabilization (Bickerstaff et al., 2017). While these challenges can result in decreased motivation and confidence, the authors contended that if supported, specifically by peers and faculty, students may in turn develop more positive academic behaviors

(Bickerstaff et al., 2017). The second type of shift in confidence occurs from earned success, such as through grades and positive feedback from faculty, resulting in increased confidence and motivation and may lead to increased aspirations (Bickerstaff et al., 2017). In turn, the authors concluded that not only does student confidence impact student behaviors and ultimately their success, but that confidence has the ability to be continually restructured throughout students' academic careers (Bickerstaff, 2017). These findings align with those of Mercer (2010) regarding the connection between academic progression, ownership of learning, and self-development. In addition to confidence, motivation is a component of self-development that can have a substantial impact on academic success (Jessup-Anger, 2011).

Academic motivation is derived from a student's beliefs about their ability to succeed and the reward for completing the process (Jessup-Anger, 2011). In a case study at one large Midwestern research university, Jessup-Anger (2011) explored how students enrolled in a one-unit first-year seminar course about what to expect during their college career made meaning of their experience in the course, particularly in relation to their motivation to learn. The study comprised classroom observations ($n$ = 3), one-on-one semi-structured interviews with students ($n$ = 4), and one semi-structured interview with the course instructor. By using a form of qualitative data analysis spirals, the author found that participants were often motivated by extrinsic factors such as grades (Jessup-Anger, 2011). Additionally, Jessup-Anger (2011) contended that the most important finding was the motivation students garnered from instructor support and feedback, which closely aligns with Peaslee's (2018) findings regarding instructor confirmation behaviors and student outcomes. Similar to Jessup-Anger's (2011) findings, Pizzolato, Olson, and Monje-Paulson (2017) found a variety of extrinsic motivators present among community college students.

In their qualitative study with California community college students (*N*= 48) who are welfare recipients, Pizzolato et al. (2017) collected a demographic questionnaire and conducted 60 minute semi-structured interviews to study achievement goals and motivation. The interviews were used to understand participants' achievement goals and their underlying rationales. In generating codes through constant comparative analysis, the authors identified achievement goals in three categories: mastery approach, performance approach, and performance avoidance (Pizzolato et al., 2017). Performance approach and performance avoidance were defined as efforts to appear competent or avoid negative judgements of others, respectively (Pizzolato et al., 2017). Whereas mastery approach referred to students who saw college as a place to learn and achieve competence, as opposed to trying to avoid judgement from others (Pizzolato et al., 2017). Through their qualitative data analysis, the authors found that some community college students are motivated to attend college in an effort to avoid negative judgment from others and to appear competent (Pizzolato et al., 2017). Additionally, among these California students receiving welfare, the authors found that students also enroll in community college to be viewed as competent parents (Pizzolato et al., 2017). Finally, students cited learning a skill and being able to demonstrate competence that will lead to a career as a key motivating factor in earning a certificate or associate degree (Pizzolato et al, 2017).

Similarly, Martin et al. (2014) found through their qualitative study that students are often motivated by extrinsic factors such as their family's expectations as well as the increased benefits and opportunities a college credential can provide (Martin et al., 2014). Through semi-structured interviews with graduates (*N* = 17) of a large southeastern community college, the authors also found that many highly motivated students are committed to completing their educational goal as a result of hardships such as job loss, homelessness, and the sacrifices made

in order to attend college (Martin et al., 2014). The findings of both Pizzolato et al. (2017) and Martin et al. (2014) align with O'Shea and Delahunty's (2018) research regarding student success. Specifically, students enroll in community college for a variety of reasons and measure their success in ways other than just program completion. Given the common motivation of pursuing a community college education is to earn increased benefits in the job market (Martin et al., 2014; Pizzolato et al., 2017), considering the practical value of education and the overall worth of attending community college is a key factor (Lohman & Dingerson, 2005).

**Practical value of education.** Many community college students, particularly older adult students, opt to pursue a degree or certificate in order to be a competitive applicant in the workforce (Cummins, 2015), to improve and update job skills (Calcagno et al., 2007), and to earn specific promotions and salary increases (Lohman & Dingerson, 2005). In their study of community college students who dropped out of occupational certificate programs before completing the certificate, Lohman and Dingerson (2005) determined that many community college students are very pragmatic in their pursuit of higher education. The authors surveyed noncompleters ($N$ = 98) from one urban community college as well as examined student records and conducted a focus group interview. By conducting an ANOVA to identify significant differences in participants' decisions to leave their programs, the authors found that a significant number of noncompleters enrolled in occupational certificates to enter the workforce or to update their skills and then withdrew from the college once they had achieved that goal (Lohman & Dingerson, 2005). The authors went on to emphasize that while community colleges may not award as many certificates to students looking to gain skills for very pragmatic and specific reasons, colleges are still accomplishing their purpose of providing students with marketable skills and workforce readiness (Lohman & Dingerson, 2005).

And while data show that community college certificates have positive impacts on earnings and may also lead to increased probability of employment, some programs of study have been attributed with zero returns and even negative economic returns for students, which calls for institutions, faculty, and administrators to understand local labor market demands and be able to provide this information to current and prospective students (Xu & Trimble, 2016). Using detailed student-level data from matched college transcript and employment data in two southeastern US community college systems, Xu and Trimble (2016) explored the relationship between earning a certificate and student earnings and employment status after leaving college. By examining the first-time student cohorts during the 2006-2007 and 2007-2008 years, the study's final sample comprised 3,868,540 earnings records for students in North Carolina ($n$ = 1,839,893) and Virginia ($n$ = 67,735; Xu & Trimble, 2016). The authors employed an individual fixed-effects method to estimate the returns on community college credentials and considered type of credential (e.g. short- or long-term certificate) and the specific programs of study (Xu & Trimble, 2016). The authors determined there are significant ($p < .05$) positive impacts of short- and long-term certificates on earnings. Additionally, they found that certificate attainment increases students' employability, which is promising given that many certificate students are adults returning to school hoping to make shifts in their careers (Xu & Trimble, 2016). However, the authors also reported substantial differences in economic returns based on fields of study and context. For example, the authors determined that North Carolina seems to place a greater emphasis on vocational certificates than Virginia, which lead to markedly higher economic returns for students in North Carolina (Xu & Trimble, 2016). Additionally, different health science-related certificates yielded either high returns or negative returns despite being under the same umbrella known as "allied health" (Xu & Trimble, 2016, p. 286). Based on these findings,

it is clear how important it is for community colleges to advise students of local contexts and labor market demands when pursuing various credentials, particularly for students that are doing so for practical and job-related reasons (Xu & Trimble, 2016). Given the mixed economic and employability returns of completing a certificate or degree and the low number of students who actually complete a program, it is important to explore students' goals for attending community college (Xu & Trimble, 2016).

**Student goals.** Many researchers divide student goals into two categories: mastery goals and performance goals (Coutinho, 2007). In examining student achievement, mastery goals are described as goals that "orient students to focus on learning and mastery of content" (Coutinho, 2007, p. 39). These forms of goals have been correlated to student outcomes such as increased self-efficacy, metacognition, and performance (Coutinho, 2007). Performance goals on the other hand are goals that "encourage students to focus on scoring better than others or avoiding the appearance of incompetence" (Coutinho, 2007, p. 40). While examining the relationship between mastery goals, performance goals, metacognition, and academic success, Coutinho (2007) surveyed undergraduate students ($N$ = 197) at a Midwestern university. The survey included a goal orientation scale, a metacognition measure, and asked for students' college GPA. By conducting regression analyses, Coutinho (2007) found mastery goals to be positively related to GPA while performance goals were unrelated. For example, students who sought to perform well on an exam without fully understanding the content did not necessarily succeed (Coutinho, 2007).

In addition to mastery and performance goals, student expectations can also serve as predictors of success. In their study of predictors of long-term enrollment and degree completion, Porchea et al. (2010) followed a sample of students ($N$ =4,481) from fall 2003 through spring

2008 at 21 community colleges across the country. By examining academic preparation, psychosocial factors that were determined by students completing the Student Readiness Inventory, sociodemographic information, and situational factors such as students' degree expectations and the number of hours they planned to work, the authors explored multiple facets that contribute to student outcomes (Porchea et al., 2010). Using a multinomial logit model, Porchea et al. (2010) found that students who expected to complete at least a bachelor's degree after community college were more likely to transfer and much less likely to earn an associate degree and not transfer. As a result of these findings, the authors purported that students' degree expectations at matriculation can be strongly predictive of their outcomes (Porchea et al., 2010).

Similar to Porchea et al.'s (2010) findings, in their review of community colleges across the United States that embed advising, progress tracking, feedback, and support into their students' educational experiences, Jenkins and Cho (2014) found that community college students who immediately identify a program of study are more likely to complete a credential or transfer within five years compared to students who identify a program of study after their first year. Martin et al. (2014) also reported that students who have clear educational goals while in community college demonstrate higher rates of success. By identifying long-term goals and understanding how being successful in college can lead to those goals, the authors contended that students are often more motivated than those who enroll undecided on their goals (Martin et al., 2014). Given their clear goals, successful students frequently follow prescriptive academic tracks to ensure their completion as opposed to exploring unrelated subjects and courses (Martin et al., 2014). In conclusion, research supports the notion that identified goals, clear pathways to achieve those goals, and long-term degree expectations all play a role in community college students'

retention and program completion (Coutinho, 2007; Jenkins & Cho, 2014; Martin et al., 2014; Porchea et al., 2010).

Student attitudes and beliefs in the form of self-development, their view on the practical value of a college credential, and their goals are important factors relating to community college program completion. While it often takes a basic level of self-development to be willing to enroll in college, pursuing a college education and the resultant experiences associated with attending college can lead to increased levels of self-development particularly in the form of self-confidence, more positive academic behaviors, and increased aspirations (Bickerstaff et al., 2017; Mercer, 2010). Additionally, many students' attitudes toward college relate to opportunities to learn marketable skills that will lead to employment (Pizzolato et al., 2017; Martin et al., 2014). While many community college students do in fact gain their desired skills and often do so before even completing a degree or certificate (Lohman & Dingerson, 2005), community colleges should expend more effort in educating students on which programs are likely to lead to employment opportunities based on labor market demands (Xu & Trimble, 2016). Finally, student goals and expectations are associated with GPA (Coutinho, 2007) and college outcomes (Porchea et al., 2010). However, helping students clarify their goals early on in their college career is a critical factor in increasing completion (Jenkins & Cho, 2014). Bean (1982) hypothesized that student attitudes, particularly their satisfaction with their institution, were a defining factor in their decision to stay at or leave an institution. While student belief in themselves (Mercer, 2010) and the practical value of an education (Lohman & Dingerson, 2005) remain important variables, the research in this chapter suggests attitudes and beliefs are more complex than just student satisfaction (David et al., 2015).

## Summary

Several salient factors emerged as part of this literature synthesis that can be further explored through a needs assessment. First, background variables such as academic preparation and attitudinal variables such as motivation are found to be the strongest determinants of student success (Calcagno et al., 2008; Martin et al., 2014). By exploring positive student characteristics and academic, personal, and cultural barriers from the perspectives of students, faculty, counselors, and administrators, it can be determined if context-specific factors align with the literature (Martin et al., 2014).

Second, by exploring cultural capital and what successful students experience in terms of knowledge, family support, and social support, data may arise that lead to connections between cultural capital in the author's specific context and student success (Košutić, 2017; Martin et al., 2014). Upon exploring cultural capital, student perceptions on the value of a college credential can be assessed, which can then inform institutional practices (Goldrick-Rab, 2010). Examining student opinions on the value of a community college degree and their knowledge of labor market expectations and human capital will aid in contextualizing the literature (Xu & Trimble, 2016).

Lastly, it is important to further examine objective interaction with the institution and how these interactions impact student success. These characteristics include the availability of student support services (Hart, 2019), access to courses (Gurantz, 2015), the role of faculty, and students' sense of belonging (Peaslee, 2018). By exploring the impact of interactions with the institution from the perspective of all stakeholders, the literature can be examined for context-specific similarities and discrepancies (Goldrick-Rab, 2010). Exploring the contributing factors to student success as positioned in the Student Attrition Model (Bean, 1982) allowed for the

development of a conceptual framework to then guide an intervention targeted at increasing community college student success (see Figure 2).

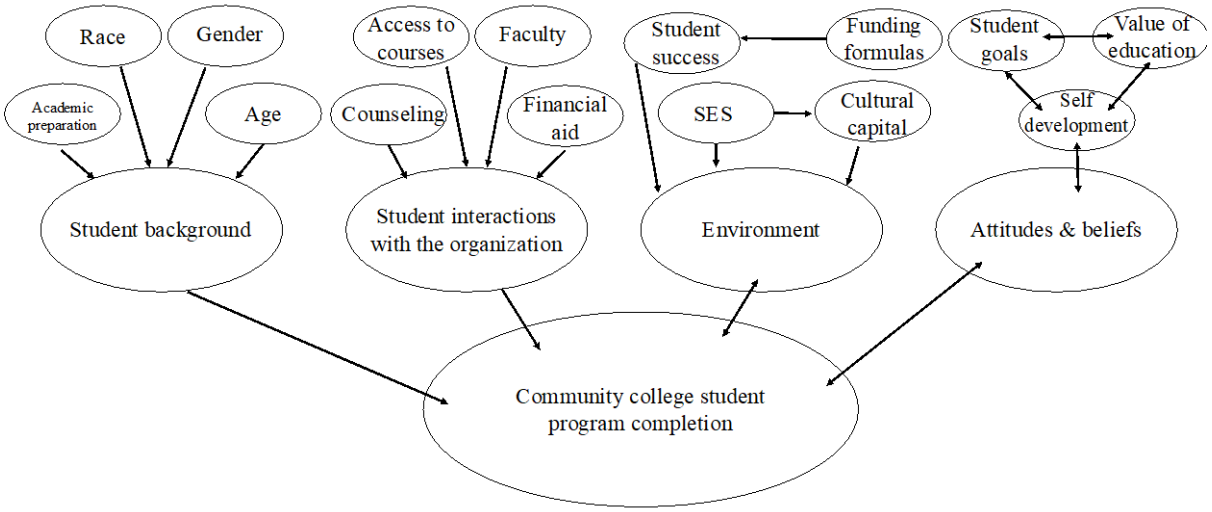



*Figure 2.* Conceptual framework.

## Chapter 2: Student Success Needs Assessment

The literature examined in chapter one revealed community college student success is a complex issue that is influenced by a wide range of factors including academic preparation, cultural capital, institutional processes, and student perceptions of the practical value of a college credential. To explore these factors as situated within the conceptual framework (see Figure 2) and within the context of OTCC, the author conducted a study exploring student, faculty, counselor, and administrator perspectives related to student success.

### Context of the Study

Founded in 1918, OTCC has been serving students in the San Francisco Bay Area for the last 102 years. During the 2018-2019 academic year, OTCC had a total enrollment of 24,985 students (California Community College Chancellor's Office, 2019). The college offers over 100 associate degree majors and over 140 certificates. OTCC is comprised of five campus sites and in addition to certificate, degree, and transfer-bound students, the college has a substantial population of non-credit English as a Second Language enrollments (California Community College Chancellor's Office, 2019). However, this study only examined students enrolled in credit bearing courses that are eligible for a certificate, degree, and/or transfer. As of the 2018-2019 academic year, the OTCC 2011-2012 student cohort demonstrated that 36.9% of students transferred to a four-year university, 19.6% of students earned an associate degree, and 3.8% of students earned a certificate (California Community College Chancellor's Office, 2019). As of fall 2018, OTCC employed a total of 1,795 classified staff, faculty, and administrators (California Community College Chancellor's Office, 2019).

## Purpose of the Study

This mixed methods needs assessment aimed to identify the barriers and supports to community college student success, specifically at one community college located in the San Francisco Bay Area. Quantitative and qualitative data were collected from students, counselors, instructional faculty, and administrators through a survey and semi-structured interviews. Based on Bean's (1982) theoretical framework and the literature review, the constructs identified include the definition of student success, student goals and motivation, cultural capital, and external and internal supports and barriers. While the chancellor's office defines student success as the completion of a certificate or degree and/or transfer, the Academic Senate for California Community Colleges (Harrell & Holcroft, 2012) argues that student success is determined by the goals and situation of each individual student. As such, the author explored how different stakeholders define student success and to what extent there is a mismatch, if any, in how success is perceived.

Student goals and motivation are defined through their identified educational goal as well as their personal goals, whether that is earning a bachelor's degree after their associate degree or being eligible for a promotion at their current workplace. Student goals are closely tied to their motivations for enrolling in and pursuing a program of study (e.g., Pizzolato et al., 2017). By exploring cultural capital (Bourdieu, 1977), the author was able to further determine the role that family, social, and cultural supports play in a student's decision to pursue an education at community college as well as how cultural capital affects their ability to succeed and navigate the system of higher education. Lastly, external and internal supports and barriers, defined as environmental factors in the literature review, were explored in an effort to gain a holistic picture of what factors relate to student success. External factors included paying for college, childcare,

and work conflicts, while internal factors included sense of belonging on campus, relationships with faculty and staff, and availability and helpfulness of student support services.

Given that the statewide, six-year completion rate of California community college students is 48.2%, there is a need to identify and implement services and systems of support that will contribute to and promote completion (California Community College Chancellor's Office, 2018). Additionally, given a newly implemented funding formula, California community colleges must demonstrate increased rates of student success in order to remain financially viable (California Community Colleges Chancellor's Office, 2018). Lastly, while community college students enroll for a variety of reasons, students experience increased competitiveness in the job market and encounter more opportunities for promotions and salary increases by earning a degree or certificate (Calcagno et al., 2007). As such, by identifying and combatting the barriers to student completion, community colleges can better support their students and institutions.

## Research Design

This mixed methods explanatory sequential study was conducted with data from students, faculty members, counselors, and administrators. The study also examined secondary data that addressed student needs and perceptions, issues related to retention, and self-assessed learning outcomes. Primary data were collected through semi-structured interviews to gather data on institutional, environmental, and personal supports, as well as barriers and student motivations. To address these objectives, four guiding research questions were developed:

1. How do community college students define their success?
2. How do community college faculty and administrators define student success?
3. What barriers and supports do students define as affecting their success?

4. What barriers and supports do faculty and administrators define as affecting student success?

## Methods

This section outlines the participant characteristics, sampling procedures, measurements, and instrumentation utilized in the needs assessment.

### Participants

Survey participants were comprised of OTCC students who were selected through a random selection of 10% of credit bearing courses across the college. At the time of the survey administration, there were approximately 21,000 students enrolled in credit bearing courses at OTCC. The student survey was administered during the ninth week of the fall 2016 semester. The survey yielded 2,112 potentially duplicated responses for a response rate of approximately 10%. Responses were potentially duplicated due to the possibility that more than one of a student's classes were randomly selected for the survey administration. Students were asked questions regarding their enrollment status, unit load, number of terms attended, and the total number of units earned. The majority of respondents identified as continuing students (64.2%), while 22% identified as new students, and 10% as returning. Participants also reported their enrollment status as full-time, 12+ units (57.5%); part-time, 6-11 units (29.1%); and part-time, 1-5 units (13.5%). Additionally, the survey results proved representative of the entire student population in terms of gender and ethnicity, but yielded an unrepresentative sample in participant age (see Figures 3, 4, and 5).

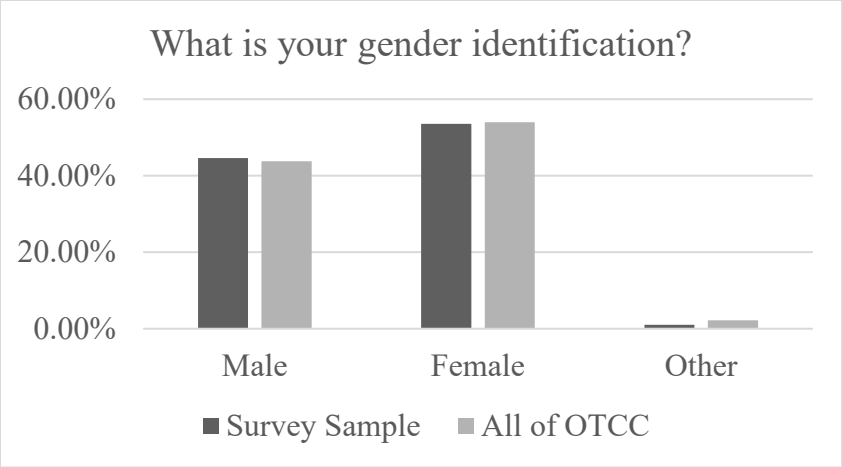



*Figure 3.* Gender identification.

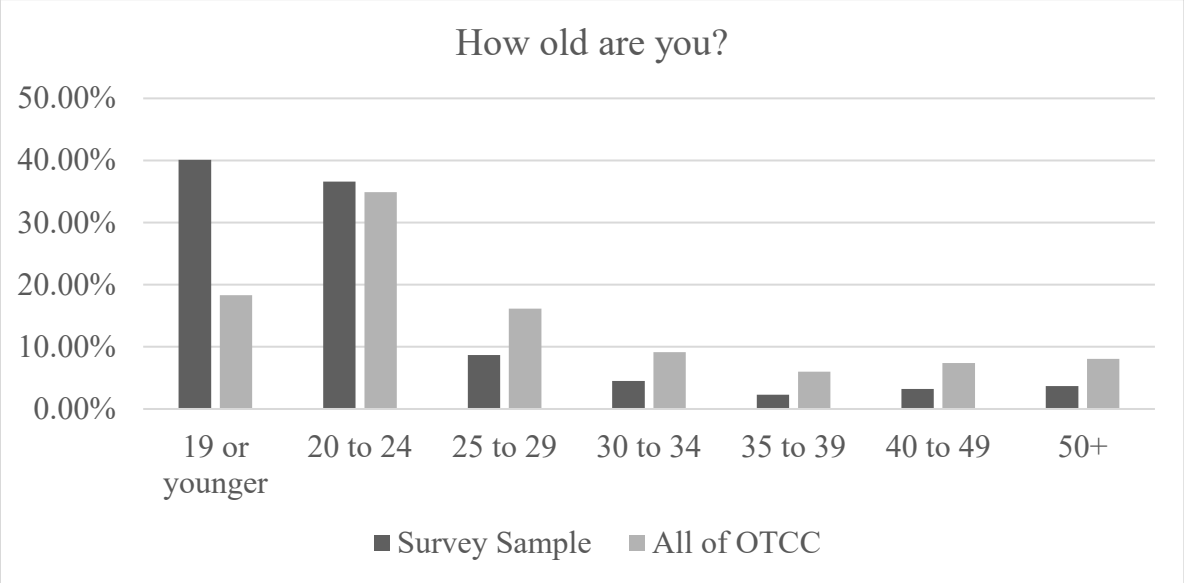



*Figure 4*. Age.

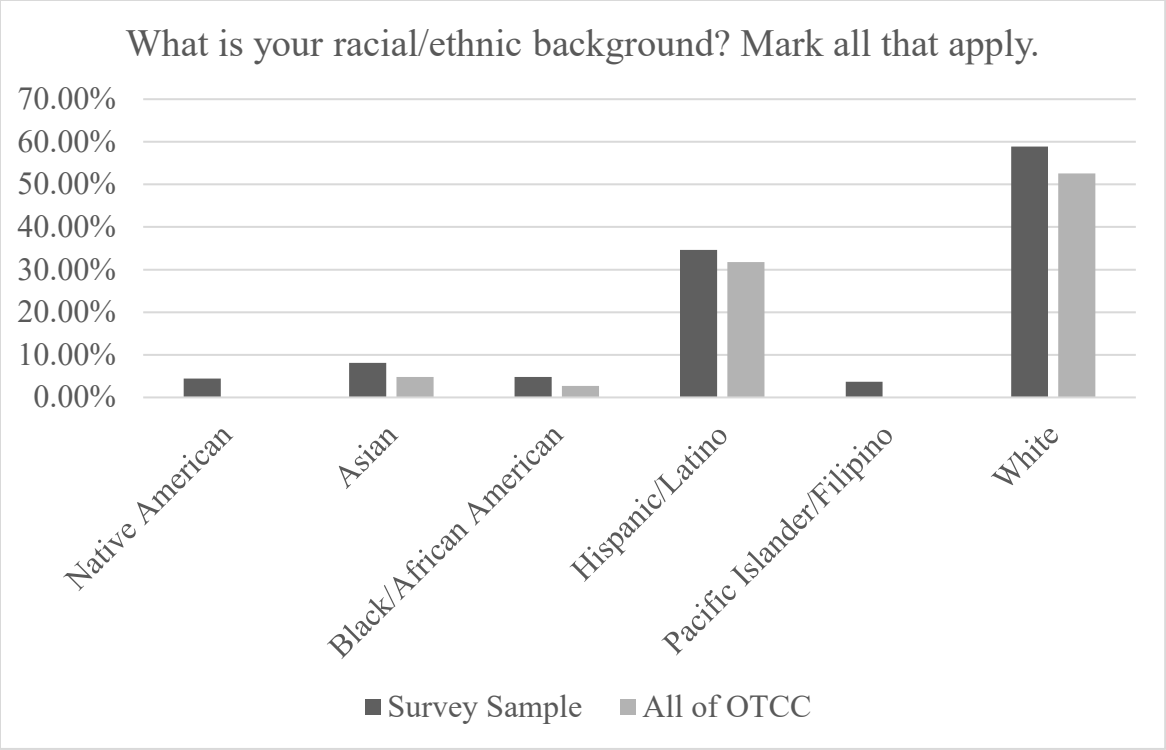



*Figure 5.* Race/Ethnicity.

Interview participants were selected primarily through convenience sampling (Patton, 1990). In total, three college administrators, three faculty academic counselors, three instructional faculty members, and five students were interviewed. The participating counselors and instructors were all full-time, tenure-track faculty members at OTCC. Two of the three administrators were male, all three counselors were female, two of the three faculty members were female, and four of the five students were female. Among the college employees, years of experience in the field of higher education ranged from seven years to 38 years. All staff participants had worked at other community colleges in California prior to working at OTCC. Student participant ages ranged from 18 to 31 and were racially diverse as participants identified as White, Asian, and Hispanic/Latino.

## Measures and Instrumentation

The study employed two instruments, a student survey and semi-structured interview protocol. The student survey (see Appendix A) provided secondary data while the semi-structured interviews (see Appendices B, C, D, & E) resulted in primary data. Together, the quantitative survey data and the qualitative interview data helped to address the constructs of student success (Oh & Kim, 2015), student motivation (Martin et al., 2014), cultural capital (Bourdieu, 1977; Martin et al., 2014), and internal and external barriers to success.

**Student survey.** The student survey was created and administered by the OTCC's Office of Institutional Research to gather data to inform district planning, policies, and practices. The survey was initially developed to model the Community College Survey of Student Engagement (CCSSE). The CCSSE is a nationally distributed survey that aims to examine the relationship between student engagement and desired student outcomes (Center for Community College Student Engagement, 2019). However, due to cost restraints, the OTCC Office of Institutional Research created their own survey to measure similar constructs of student engagement and outcomes.

The survey was first administered in the spring 2001 semester and has been administered every three years since the initial survey in an effort to gather longitudinal data. For the purposes of this study, the survey from fall 2016 was examined. A group of faculty members, student services and academic affairs administrators, and institutional research analysts created and revised the survey, with the most recent revisions taking place in 2013. These revisions included removing questions about mother and father educational attainment and adding options for internal and external barriers.

The survey examined for this needs assessment consisted of 35 questions comprised of Likert-scale type questions and open-ended questions that allowed students to write in their own responses. Survey questions were designed to gather data in the areas of student status ($n$ = 4), access to campus and services ($n$ = 6), demographics ($n$ =13), communication ($n$ = 4), retention ($n$ = 3), campus climate ($n$ = 3), and institutional learning outcomes ($n$ = 2). Student status was measured in terms of enrollment status, unit load, number of terms attended, and number of units earned. Access to campus and services were assessed through time of class attendance, location of classes and utilized services, typical mode of transportation, and student engagement activities such as participation in student clubs and attendance at campus-wide activities. Demographics were evaluated in terms of age, gender, ethnicity, sexual orientation, gender identity, primary language, parental education, veteran status, financial aid status, enrollment in basic skills (remedial) courses, educational goal, work status, and housing situation. Student communication was measured by what mobile devices students bring to school, their preferred method of communication, and information received that influenced their decision to enroll at the college. Retention was measured through self-identified external (outside of OTCC) barriers to staying in college, such as financial problems and work conflicts in addition to internal (within OTCC) barriers to staying enrolled, such as access to financial aid services and class availability. Campus climate was measured through student perceptions of being treated with respect by various stakeholders such as instructors, other students, office staff, counselors, administrators, campus police, and librarians; as well as questions regarding diversity and student engagement. Lastly, institutional learning outcomes were measured through self-assessments of skill improvement in areas such as reading and writing skills, active listening skills, understanding

and demonstrating social and civic responsibility, and recognizing and acknowledging cultural and individual diversity.

**Interviews.** The interview protocols (see Appendices B, C, D, & E) employed in this study, with permission from the authors, were modified from the instrument used by Martin et al. (2014) in their work assessing the role of motivation and self-empowerment in community college student success. Martin et al.'s semi-structured interview protocol was developed based on Braxton, Hirschy, and McClendon's (2004) research on community college student persistence. Braxton et al. (2004) posited that entering student characteristics are the only determining factor in student success. In designing a conceptual framework which led to the development of the interview protocol, Martin et al. (2014) identified three areas of student characteristics: cultural capital, such as family background and social class; college plans, including attendance goals and motivation; and academic preparation, which includes prior schoolwork and performance.

Based on the identified constructs from Martin et al.'s research, student participants in this study were asked questions (see Appendix B) related to academic preparation, the social organization of schooling, cultural capital, college plans, and persistence. Counselors were asked questions (see Appendix C) such as which student characteristics lead to persistence, how does their work as a counselor promote student success, and do they feel the college supports student success. Instructional faculty were asked similar questions (see Appendix D) as counselors regarding student characteristics, but were also asked what academic, personal, and cultural barriers impact student success. Administrators were asked (see Appendix E) what their role is in promoting student success, what do they view as the main barriers to student success, and what does the college do to facilitate student success.

The original interview protocol by Martin et al. (2014) was modified in several ways for this needs assessment. First, interview questions were removed if they were addressed in the student survey, such as questions about demographics, and not all follow-up questions were asked in an effort to keep the interviews between 20 and 30 minutes. Second, two protocols were removed from the final instrument. The protocol for financial aid representatives was not part of the sample population given that there were several questions addressing financial aid in the student survey and the student portion of the interview, and because financial aid is not a factor explicitly being examined in this study. Also, the protocol for the Director of Student Retention was removed as that position does not exist at OTCC.

## Procedure

This needs assessment can be described as an explanatory sequential mixed methods study because the quantitative survey data was collected by OTCC during the fall 2016 semester and then analyzed, while the qualitative interview data was collected and analyzed during the spring 2019 semester to further expand upon the survey results (Creswell & Plano-Clark, 2018).

### Data Collection

The researcher was provided access to the survey instrument and raw data by OTCC's Director of Institutional Research in April 2019. After running descriptive statistics in SPSS, the researcher recruited participants and conducted the semi-structured interviews during April and May 2019.

**Surveys.** OTCC's student survey was administered in 10% of randomly selected credit bearing courses across the college. While the college has four of five campus sites that offer courses for credit, all randomly selected courses were on two of the four sites. Paper surveys were provided to the faculty member teaching the randomly selected course and students were

asked to complete and turn in the six page survey prior to the end of class that day. Although it was encouraged, students were not required to complete the survey and not doing so had no bearing on their grade in the class. The surveys were anonymous and included a disclaimer that any information shared would not be made available to students, staff, or faculty (see Appendix A). The surveyed classes included day and evening classes on the two participating campuses. While no reliability or validity testing has been conducted on the student survey, the longitudinal results remain fairly consistent. However, generalizability cannot be claimed as not all campus locations are represented and the district's substantial non-credit student population is not included in the sample. Survey responses were then recorded electronically into an Excel spreadsheet based on the paper responses and uploaded to SPSS for further analysis.

**Semi-structured interviews.** The author used convenience sampling to identify participants for the semi-structured interviews (Patton, 1990). The three participating administrators received emails requesting their participation and they all positively responded. All full-time faculty counselors at OTCC were sent an email requesting their participation, and those agreeing to participate received a follow-up email about scheduling the interview. While the goal of data collection was to interview two to three counselors, more than three counselors volunteered to participate. Consequently, those who were not interviewed as part of this study were asked if they would be willing to participate at another time if more data needed to be collected. The counselors who were interviewed were selected by availability and ease of finding a time to conduct the interview. Instructional faculty were identified similarly to counselors through a college-wide email invitation. Additionally, several counselors are also instructors, but for those who met both classifications, they were interviewed either as a counselor or an instructor, not both.

Students were asked to participate in a short interview when they came in to meet with a counselor as part of their education planning. Other counselors in the department also recommended students who they thought would be willing to participate and who could share interesting perspectives related to student success. All students who were asked to participate were advised that participation was completely voluntary and that there would be no negative repercussions should they decline to participate. All interview participants signed a consent form evaluated and approved by the Johns Hopkins University Homewood Institutional Review Board (HIRB) and the executive sponsor representing OTCC. As part of the consent form, participants agreed for the interviews to be audio recorded by the recording and transcription software, Otter.ai. While the transcription software resulted in high levels of accuracy, all interviews were reviewed several times for accuracy and were then qualitatively coded. On average, the interviews lasted between 15 and 30 minutes.

**Data Analysis**

Quantitative survey data were uploaded from an Excel spreadsheet to SPSS and checked for accuracy. Descriptive statistics were analyzed in terms of participant demographics (see Figures 3, 4, and 5), educational goals (see Table 1), and barriers within and external to OTCC (see Tables 2 and 3). Demographics were also analyzed for representativeness when compared to the entire student population of OTCC (see Figures 3, 4, and 5).

Following the work of Creswell and Poth (2018), qualitative data were organized and coded by a priori and emergent themes in an effort to form an interpretation. Interview recordings were listened to and transcripts were reviewed several times before being coded in an effort to understand the data as a whole prior to in-depth analysis (Creswell & Poth, 2018). Per Creswell and Poth's (2018) advice, a lean coding approach was utilized, which began with a list

of four codes that emerged from the interviews and aligned with the empirical research literature: the importance of student goals (e.g., Jenkins & Cho, 2014), the role faculty play in promoting student sense of belonging (e.g., Peaslee, 2018), continual student support (e.g., Niteck, 2011), and challenges enrolling in required courses (e.g., Gurantz, 2015). While the constructs explored in this study were chosen and operationalized based on the relevant literature regarding student success, the practice of emergent coding was utilized so as not to exclude any potentially salient themes (Creswell & Poth, 2018). Interview transcripts were reviewed in their entirety and the author highlighted and made notes directly on the transcripts. Several rounds of coding were conducted prior to developing the themes.

## Findings and Discussion

In answering the four research questions, several themes emerged from the data. Approximately 85% of survey respondents identified their educational goal as one that meets the California community college chancellor's office definition of success either by earning a certificate, associate degree, and/or transfer to a four-year university (see Table 1). Given the high rate of intent to complete a program, the data confirm the need to examine why only 52.3% of students at OTCC meet that goal and why the other 14.5% percent of students do not intend to complete a program of study.

When asked interview questions regarding success, all five student respondents answered in the context of their current academic and social success. No student interview participants directly equated success with program completion. Alternatively, all faculty and administrator interview participants were aware of the chancellor's office's definition of student success, but some acknowledged that those metrics of success are not necessarily in the best interest of students.

Table 1

*Educational Goal*

| What is your main education goal at OTCC? | *n* | % |
|---|---|---|
| Prepare for GED | 11 | 0.5 |
| Job training | 30 | 1.4 |
| Improve basic skills | 38 | 1.8 |
| Not sure/undecided | 97 | 4.6 |
| Exploring educational interests and goals | 131 | 6.2 |
| Earn a certificate | 182 | 8.6 |
| Earn an AA/AS | 400 | 18.9 |
| Transfer to a four-year university with or without an AA/AS | 1205 | 57.1 |

For example, when asked if the college does an adequate job of supporting students, one counselor replied:

> I think that sometimes we become a little too focused on graduation rates rather than did this experience accomplish what you wanted and or needed? I'll use my niece as an example. She came here for a semester and bombed during her first semester, decided that she wanted to try again, second semester midway through, or four weeks through, decided school wasn't for her. So, she didn't graduate. She didn't get a certificate, but she's assistant manager at [*a local grocery store*] in the meat department. They pay 25 bucks an hour and school wasn't for her. I would have liked it to be for her. But that's my desire. Not hers. School wasn't for her. But coming in, that'll never be counted as success because she didn't get a certificate or she didn't get an associate's degree. However, coming to school and having that experience, allowed her to realize school is not for her. (Counselor A, Interview 4-23-19)

In answering the third research question, much of the survey data aligned with the literature specifically regarding barriers to persistence such as financial issues, job conflicts, class time offerings, and class impaction (Calcagno et al., 2008; see Tables 2 and 3). There were also identified barriers that did not appear in the literature, such as trouble parking on campus and the cost of textbooks.

Table 2

*Challenges Outside OTCC*

| Have any of these challenges impacted your ability to stay in college in the past year? Mark all that apply. Challenges outside OTCC. | *n* |
|---|---|
| Childcare problems | 77 |
| Distractions or conflicts at home (hard to study) | 461 |
| Family pressure or responsibility | 412 |
| Financial problems (not having enough $$) | 679 |
| Housing problems | 206 |
| Job pressures (time schedule conflicts) | 621 |
| Lack of motivation and interest in attending college | 307 |
| Lack of self discipline to study or go to classes | 403 |
| Lack of clear educational/career goals | 327 |
| Overall time pressures | 431 |
| Personal problems | 414 |
| Physical health | 190 |
| Mental health | 291 |
| Transportation problems | 172 |
| Cost of textbooks | 539 |
| Inadequate computer/internet access | 103 |
| None of the above | 463 |

The student interviews identified barriers and supports that affect their success that aligned with the literature regarding motivation and cultural capital (Martin et al., 2014). One student for example, Student A, emphasized that their Honduran culture views formal education

as a “scam” and that it was not until they lived with an American foster family that they felt supported to pursue an education. Additionally, all five interviewed students expressed that their families expect them to pursue a college degree, which in turn serves as a continual motivating factor.

Table 3

*Challenges at OTCC*

| Have any of these challenges had an impact on your ability to stay in college during the past year? Mark all that apply. Challenges at OTCC. | *n* |
|---|---|
| Access to financial aid services | 484 |
| Access to academic counseling | 175 |
| Classes are not available at the time I need to take them | 732 |
| Classes are not available at the location (or campus) I want to take them | 421 |
| Classes I want are not available online | 226 |
| Class work is too hard | 218 |
| Parking | 797 |
| Too much to go through to get services/classes | 96 |
| I couldn't get into the classes I needed (the classes were full) | 566 |
| The classes I enrolled in were cancelled | 131 |
| I cannot find the information I need on the OTCC website | 73 |
| Difficulty completing the registration process | 70 |
| My learning style does not match instructor's teaching style | 361 |
| None of the above | 472 |

The student interviews also aligned with the literature and other qualitative data regarding clear goals (Jenkins & Cho, 2014), academic preparation (Davidson, 2015), and utilizing support services, particularly with regard to returning students (Bahr, 2008). In addition to discussing in detail their appreciation for and frequent visits to the tutorial center to help them study for their

dental hygiene courses, when asked what made them feel prepared to succeed at OTCC, one student responded:

> I think partially just maturity. Like, just having good study skills and everything. Coming out of high school, I wouldn't have had that. And going into it I knew what I wanted to do. So, I think that, just like, I want to get it done. (Student B, Interview 5-2-19)

Additionally, the student respondents agreed with the literature and college personnel with regard to being self-motivated and seeking out support services (Martin et al., 2014). When asked if the college does anything to help students succeed, one student responded:

> Yes, I think it's, I think it's if you take the initiative, you know? I think [*inaudible*] well, I get a lot of emails and stuff like that, which is great, but you have to seek it out. And then once you seek it out, they know that you need help with something. (Student B, Interview 5-2-19)

When asked if they felt as though the resources were in place at the college to support student success, Student B responded "Yes, definitely".

One emergent theme that was particularly interesting was the idea that student support services are not as present and readily available to students once they enroll at OTCC. For example, one student spoke very highly of OTCC's Hispanic Service Institute grant program, Connections, but when asked if the college is committed to their success, they responded:

> I went into Connections thinking they would help me as best as they could, and they did. But when it came to me actually transferring and doing the things that I needed to do to transfer, that wasn't so helpful. I had to really step out of my comfort zone and speak up and ask for more information. Like, because I don't have anyone in my family to look to for that, so I have to search for my own answers. (Student C, Interview 5-7-19)

These responses imply that OTCC may want to further consider how its programs and services can best support students from recruitment through program completion.

Finally, student motivation and clear educational goals were recurrent themes among all interview participants. All five student interviewees confirmed that upon initial enrollment they expected to graduate from OTCC. And while all student respondents shared that it is going to take them longer than they had initially anticipated to complete their programs, they are all still on track for program completion. Based on the student responses, there is room to further explore the relationship between clearly defined goals and program completion as well as the factors that contribute to students being unsure of their educational goal or for pursuing a goal other than program completion.

In answering the fourth research question and how faculty and administrators define barriers and supports that affect student success, a common theme among counselors, instructors, and administrators was that students who persist to completion are typically self-motivated, proactive in seeking out support services, and have a clearly defined goal. One faculty instructor described characteristics of successful students as:

> Type A, who, I think, maybe have someone that they could follow their footsteps, you know, like a parent or older sibling who has gone to college and can guide them. Even, you know, like a friend who has a network of resources maybe outside of the college as well as a network of resources on campus. I think that people, if we looked at graduation rates, and we looked at, you know, connectedness, I think people that are more connected on campus are going to be probably in the top tier of graduation. (Instructor A, Interview 5-3-19)

Meanwhile, when asked the same question about student characteristics that are associated with success and completion, one of the vice president's views closely aligned with the literature regarding the importance of academic preparation (Davidson, 2015):

> Hm, well I think students who have greater success and persist to graduation come in at college level. So, there's no required remediation. I think in greater numbers, they tend not to be first generation. They also tend to not be low income. But I think the big one is they come in prepared. (Administrator A, Interview 4-24-19)

It is evident that many of the community college employees interviewed identify student characteristics, such as motivation and academic preparation, as common barriers. Each of the 14 interview participants also identified institutional characteristics that serve as barriers to student success such as financial aid, modes of instruction and course availability, and the availability of student support services. A common theme was that the college succeeds at getting students to enroll, but they struggle to offer continued support once students start attending. All interview participants shared the opinion that the college does support student success and while current efforts are helpful, more can be done. In discussing ongoing student support, one of the three interviewed counselors elaborated:

> I think we have a lot of things in place to support student success. Can we do better? Yes. I think we've got, I think we try to inundate our students in too many different directions. With information, the social media, the emails, the you know, it's like, then I think what that leads to is students having to make a decision on their own about what's the most important thing to pay attention to. Perfect example: financial aid. We're trying to really promote students applying for financial aid. Where's the follow up after that, though?

> You know, it's one thing to promote and to help students fill out the application. But once the students fill out the application, we assume they know what to do next. But we're not giving that support on an everyday ongoing basis about, hey, you know, here's what you need to do next. And if you don't know what to do, come on in, we'll help you figure out your portal, your financial aid portal, never mind your student portal, but your financial aid portal. (Counselor A, Interview 4-23-19)

The quantitative and qualitative data examined for this needs assessment confirmed there are several barriers within OTCC and external to the college that affect student success and completion. Notably, all stakeholders that were interviewed agreed that OTCC extends efforts to support its students, but that students must take the initiative to access those services. Additionally, while all interviewed college personnel acknowledged the state's metrics of student success, they also recognized the many factors that contribute to student success. Overall, students, faculty, and administrators all identified strengths and weakness at OTCC that may contribute to the college's current completion rates.

**Limitations**

In addition to the needs assessment findings, there are several limitations to this study. First, the sample size is too small to claim generalizability across OTCC or California community colleges as a whole. Second, convenience sampling was used to identify administrators, faculty instructors and counselors, and student participants. Admittedly, faculty participants were all from within the same academic department, and as a result, participant responses may have been more uniform than had there been multiple departments represented. Additionally, student interview participants were identified as students who willingly came in to meet with a counselor. As such, these students were already highly motivated to seek out support

services and all participants met with counselors regularly regarding their academic plan. Students who do not seek out support services and who have not developed an academic plan with a counselor may have had substantially different opinions regarding their success and the supports and barriers that affect it. Finally, the secondary survey data was collected during the fall 2016 semester, which does not include many current students. Additionally, during the fall 2017 semester, OTCC was impacted by a severe natural disaster that led to significant housing scarcity in the region and led to a decrease in the number of full-time equivalent students attending the college. As such, survey responses could have been markedly different across multiple survey measures had the data been collected post-disaster.

## Conclusion

The emergent and a priori themes from the needs assessment were all supported by the literature, yet identified context-specific data regarding student success. Course scarcity (Gurantz, 2015) and challenges enrolling in required courses was a common barrier among students at OTCC based on the quantitative and qualitative data. While the college could offer more sections of impacted classes and more online classes, the literature contends that there are a myriad of factors related to budget and funding that would make this issue challenging to confront with a site-specific intervention (Gurantz, 2015). The identification of student goals was also viewed as a key factor in student success from all stakeholders interviewed. One theme that emerged related to student goals was how challenging it was for students who switched majors or programs of study to remain on the same timeline and finish within their ideal timeframe. While there are program requirements that cannot be waived and must be completed in a sequence, there is room for improvement in advising students how to make productive course

selections that can potentially apply toward multiple programs. However, as identified through the interviews, students must take the initiative and seek out academic counseling.

The survey responses also yielded rich data to answer research question three: what barriers and supports do students define as affecting their success? The survey responses aligned when triangulated with the student interview responses and the literature. Further, the counselor, faculty, and administrator interviews aligned with the student responses and resulted in similar responses in answering research question four. Additionally, multiple counselors, instructors, and administrators cited factors that were prevalent in the literature such as first generation status (Moore & Shulock, 2010), academic preparation (Davidson, 2015), and the role that student self-development plays in success (Mercer, 2010).

Conversely, there were discrepancies in the answers for research questions one and two. While the vast majority of college personnel interviewed viewed success as certificate or degree completion and/or transfer, not all student responses aligned with the chancellor's office metrics of student success (California Community College Chancellor's Office, 2019). For example, while all student interview participants acknowledged that graduating from OTCC entailed earning an associate degree, when asked broad questions regarding their success, all participants referred to succeeding in their current classes and utilizing academic supports as their metric of success. While all five student interviewees confirmed they are planning to earn a degree from OTCC, none mentioned their degree when answering questions about how OTCC helps them to be successful. This data aligns with the idea that community college students view their success in various ways and that earning a certificate or degree is just one measure of success (Boggs, 2011).

Three key findings emerged from the needs assessment data. First, data emerged that the students interviewed in the needs assessment did not understand the requirements necessary to earn a certificate or degree and/or transfer. Moreover, interviews with instructional faculty, counselors, and students confirmed that many students do not understand foundational concepts such as general education requirements versus a major, unit requirements, and transfer timelines. Second, both the survey and interview data confirmed that seeking out support services can be inconvenient and arduous for students. Many students cited long wait times or confusing information from counseling ($n$ = 175) and financial aid ($n$ = 484), while others shared that despite being part of grant-funded programs and smaller learning communities, they still had to seek out accurate and helpful information beyond those services. Given that students who are most in need of support services are often the least likely to seek out those services (Jenkins & Cho, 2014), OTCC may want to explore ways to make support services more accessible to all students. Finally, a finding emerged that the metrics for defining success for an OTCC student do not align with the expectations of the chancellor's office. When asked about their success, all five student interview participants referred to their current academic performance that semester, their social/emotional well-being, or their overall college experience. When further asked about metrics of success and graduation, many students expressed ambiguity in their responses regarding what constitutes graduation and program completion. This finding is further substantiated given that only 84.6% of respondents indicated on the survey that they intended to complete a goal that meets the chancellor's office's definition of success.

The literature contends that easy access to support services (Hart, 2019) and an understanding of their role as community college students (Karp & Bork, 2014) can have profound impacts on student outcomes. As a result of this needs assessment, there is a need to

explore how college personnel can promote available services as well as establish a campus culture that promotes student completion. By further exploring these themes, there is increased potential to align responses to research questions one and two, and to address responses related to research questions three and four. By developing a shared response into the issues raised by the research questions, OTCC can create systems of support that better meet the needs and goals of students as well as the goals put forth by the chancellor's office.

## Chapter 3: Intervention Literature Review

As discussed in earlier chapters, community college students at one institution in the San Francisco Bay Area demonstrate low rates of program completion (California Community Colleges Chancellor's Office, 2019). Based on evidence from the needs assessment conducted during the spring 2019 semester, the college's completion rate may be attributed to a need for increased student knowledge regarding program requirements and existing support services that are difficult for students to access. Long wait times and siloed services that are spread across campus serve as direct barriers to student success (Nitecki, 2011). Similar barriers were expressed by OTCC student participants during the needs assessment. Moreover, even knowing about the importance of accessing support services assumes students possess a certain level of cultural capital, as defined in chapter one, and the ability to successfully navigate the system of higher education (Bourdieu, 1977; Martin et al., 2014).

Many community college students do not understand graduation and transfer requirements (Bers & Schuetz, 2014), and have few options for gaining the necessary knowledge outside of support services on their college campus, such as counseling (Bahr, 2008). To address disparities in cultural capital and to offer more continued support throughout students' entire college careers, community college counseling departments can explore ways to make support services and graduation requirement information more accessible to all students, rather than just those who make a concerted effort to seek out services. This intervention literature review begins with a discussion of the needs assessment findings as presented in chapter two, examines potential interventions within the literature, and concludes with a proposed intervention to address low rates of community college student completion at OTCC. The intervention literature

contextualizes the proposed intervention as well as provides justification for its use in a dissertation study.

## Overview of the Needs Assessment Study

During the spring 2019 semester, a needs assessment study was conducted at OTCC to further explore the factors related to students' completion rates. The needs assessment followed a thorough review of the literature to examine contributing factors such as institutional support services (Hart, 2019; Bahr, 2008) and student characteristics such as cultural capital (Bourdieu, 1977; Martin et al., 2014). The mixed methods study examined secondary survey data collected during the fall 2016 semester as well as semi-structured interviews with students, instructional faculty, counselors, and administrators. The results of the needs assessment informed the direction of this review of intervention literature.

The needs assessment identified barriers to student completion within and external to OTCC. Within OTCC, the top three challenges identified were parking ($n$ = 797), classes not offered at the time students need them ($n$ = 732), and being unable to enroll in classes due to sections being full ($n$ = 566). Outside of OTCC, the top three challenges were identified as financial problems ($n$ = 679), job pressures and time conflicts ($n$ = 621), and the cost of textbooks ($n$ = 539). When asked what students' educational goal at OTCC was, 14.5% of survey participants identified a goal other than one that meets the chancellor's office metrics of success, such as preparing for the GED, exploring personal interests, or improving basic skills.

Overall, the needs assessment findings suggest that the current practices at OTCC are not increasing student knowledge of degree requirements or aligning stakeholder definitions of success. Indeed, offering district-wide services and promoting positive outcomes may contribute to a college culture rooted in student success and program completion. Therefore, the literature

review described in this chapter examines potential interventions targeted at increasing student knowledge of program requirements, available services, and establishing a college culture that promotes student completion. The examination of the proposed intervention is grounded in two theoretical frameworks: Miles' (1965) organizational health theory and Lave and Wenger's (1991) situated learning theory.

## Theoretical Frameworks

In chapter one, student completion was examined through Bean's (1982) student attrition model, which explored contributing factors related to student background, objective interactions with the institution, environmental factors, and student attitudes and outcomes. The student attrition model allowed for a comprehensive examination of contributing factors to student completion, which led to the examination of constructs such as cultural capital, student support services, funding formula implications, and student-identified goals. In exploring interventions to address the problem of low completion rates, it seemed prudent to explore frameworks that addressed organizational outcomes as well as frameworks that the intervention itself could be grounded in. The following intervention literature review considered Miles' (1965) organizational health framework as rationale for the need to increase program completion specifically within the context of OTCC, while Lave and Wenger's (1991) situated learning theory served as the framework for the intervention itself.

### Organizational Health

The problem of low community college completion rates is multifaceted. For one, the Bureau of Labor Statistics (2019) data demonstrate that in order to achieve more and better opportunities economically and professionally, individuals must pursue and complete a program of study in higher education. Second, low completion rates are particularly problematic for

community colleges in California due to a newly implemented completion-based funding formula (California Community College Chancellor's Office, 2018). As such, in order to remain financially viable, institutions must demonstrate increased rates of certificate and degree completion and/or student transfers to four-year universities.

In exploring this problem of practice from an institutional perspective, Miles' (1965) framework of organizational health was relevant in considering planned change and improvement. Miles (1965) defined organizational health as "the school system's ability not only to function effectively, but to develop and grow into a more fully-functioning system" (p. 12). Miles further contended that educational organizations exist based on inputs such as money, personnel, and students, and produce outputs such as achievement, morale, and learning motivations among the organization's clients. In addition to the inputs and outputs, members of the organization must grasp the goals of the institution, which in the case of OTCC is increasing student completion. Miles developed ten dimensions of organizational health that he argued are not mutually exclusive, yet interact with each other within any organization: goal focus, communication adequacy, optimal power equalization, resource utilization, cohesiveness, morale, innovativeness, autonomy, adaptation, and problem-solving adequacy (see Figure 6). Miles' (1965) work on organizational health concluded that organizational development and small scale projects toward planned change are innovative and likely to strengthen the health of an educational organization.

Unique to this context and the parameters of the Student Centered Funding Formula (California Community College Chancellor's Office, 2018), OTCC's organizational health is highly dependent on its consumers, or students. As such, OTCC must attract and retain students through program completion in order to achieve its desired outputs. Based on the needs

assessment findings and Miles' (1965) dimensions of organizational health, OTCC may benefit from paying particular attention to goal focus, communication adequacy, and innovativeness.

In terms of goal focus, OTCC leaders have made it clear to faculty and staff that its goal is to increase completion rates and continually demonstrate that it meets the state's metrics of success in order to receive increased institutional funding. According to Miles (1965), this goal is achievable with existing or available resources and is congruent with the organization's purpose. Miles also purported that the communication adequacy, or the "movement of information" (p. 18) is crucial given the multitude of small groups that comprise an entire educational organization. While OTCC has adequately communicated its goal of increased completion to its faculty and staff, it now must effectively communicate information to students on how to achieve completion. Lastly, innovative organizations, as described my Miles, invent "new procedures, move toward new goals, produce new kinds of products, diversify itself, and become more rather than less differentiated over time" (p. 20). In order to increase student knowledge, improve access to support services, and align the understanding of student success across stakeholders, it is crucial to examine the most applicable modes of delivery to students to effectively communicate the college's goal, ideally in the form of an innovative intervention. Finally, beyond the organization's health, given the need for a student-centered intervention bolstered by student participation and reflection, utilizing a second theoretical framework, situated learning theory (Lave & Wenger, 1991), will allow students to actively participate in the organization's health.

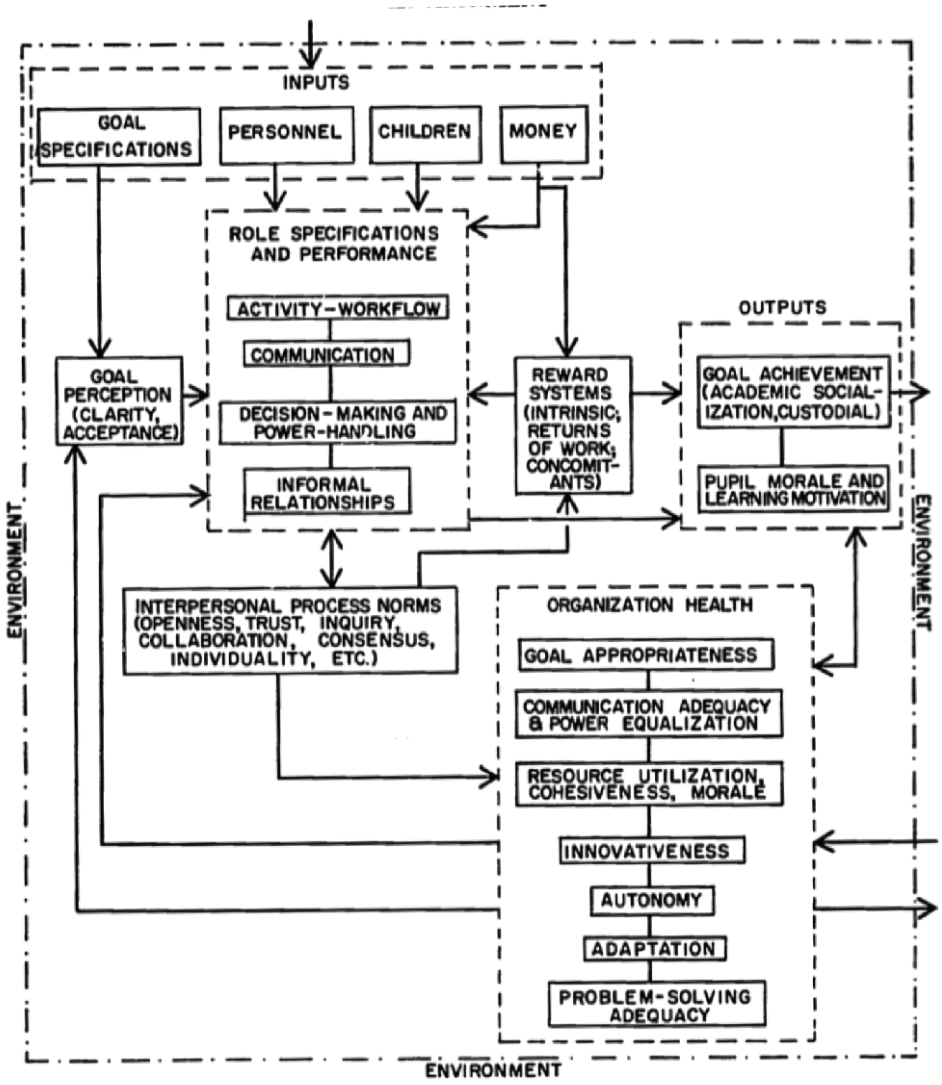



*Figure 6.* Organizational health framework. Reprinted from *Change processes in the public schools* (p. 16) M. B. Miles in J. M. Kitchel, 1965, Eugene, OR: The Center for Advanced Study of Educational Administration, University of Oregon. Copyright 1965 by University of Oregon.

**Situated Learning**

In addition to organizational health theory, situated learning theory is a well suited framework for this problem of practice given the framework's emphasis on context, culture, and social interaction within OTCC (Lave & Wenger, 1991). As opposed to behavioral observations characterized by social learning theory, by actively participating in the learning process within the community college context, students have the opportunity to become active agents in the

learning process. Accordingly, an intervention grounded in situated learning theory has the potential to increase students' feelings toward OTCC, academic success, and degree completion. Lave and Wenger (1991) introduced situated learning theory as a way to explore the relationship between learning and the social situation in which it occurs. The authors contended that learning must occur in an *authentic context*, or the context in which the knowledge is applied (Lave & Wenger, 1991). Further, through *legitimate peripheral participation*, or the process by which learners become ingrained in a community and become a full participant in a sociocultural practice, learners are able to co-construct knowledge that is situated in a specific context (Lave & Wenger, 1991; see Figure 7). While Lave's (1988) research primarily pertained to mathematics, it can be extended to topics beyond mathematics. Research has also shown that a fit between individual personality and the environment is particularly important in relation to student outcomes and academic decision making (Astin, 1993; Porter & Umbach, 2006).

Pertaining to this intervention literature review, the author specifically explored potential interventions that could address the three themes identified through the needs assessment while considering how to involve *people, activity,* and *ingredients* (see Figure 7). With regard to people, both students and facilitators of an intervention should consider the history, culture, and practices of OTCC in order for students to increase their knowledge within the authentic context of the college. In terms of activity, interventions should include opportunities for simulation, practice, and/or collaboration to allow for further interaction between people and with the intervention ingredients. Finally, ingredients related to potential interventions may include institutional tools and resources, an emphasis on technology, and using language that represents the cultural practices and norms of OTCC.

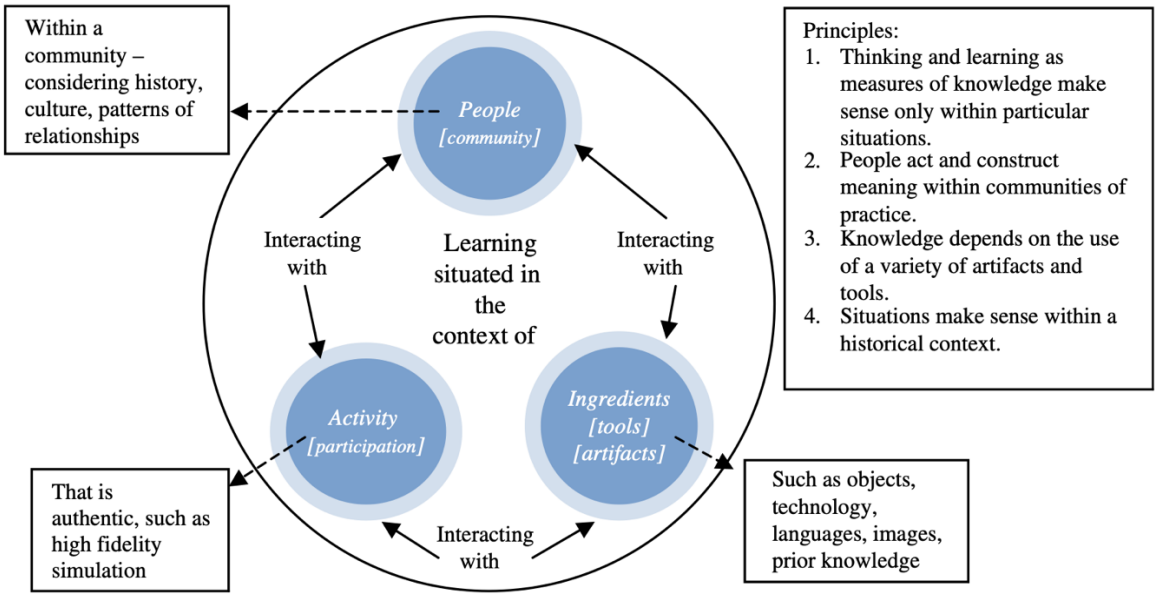



*Figure 7.* Situated learning theory. From "Situated cognition: A learning framework to support and guide high-fidelity simulation" by J. B. Paige and B. J. Daley, 2009, *Clinical Simulation in Nursing*, *5*(3), p. 99. Copyright 2009 by Elsevier. Reprinted with permission.

One ethnographic study found that situated learning bridged divides between formal learning objectives and barriers in students' personal lives that have been identified as contributing factors to school failure and unemployment (Nistor, Stanciu, Vanea, Sasu, & Dragota, 2014). In their mixed methods study, Nistor et al. (2014) explored whether situated learning could bridge the gap between Romanian culture and formal schooling among Romanian students aged 12 to 22 ($N$ = 18). Through qualitative narrative biographical data, the researchers found that situated learning allowed students to acquire extensive knowledge in a given domain, increase their participation in said domain, and acquire social recognition. Additionally, this same study emphasized that in order for faculty to support student outcomes via situated learning opportunities, institutions must provide teachers with time, resources, and the academic freedom to do so (Nistor et al., 2014).

In another different mixed methods study in western Turkey, the authors found no statistical significance for students participating in situated learning, but participants did cite

several benefits. The students who received an experimental situated learning treatment to improve their vocational English learning were satisfied with the authentic learning context; the authentic activities; instructor support and scaffolding; the multiple perspectives and differentiated tasks; the opportunity to collaborate with peers; self-reflection and analysis; and authentic assessments as opposed to traditional forms of evaluation (Özüdogru & Özüdogru, 2017). Although, a positive increase in students' English learning was found, there was not a statistically significant difference ($p > .05$) for students who experienced situated learning.

The following review of intervention literature begins by focusing on campus culture and strategic advising practices as well as the associated limitations with particular consideration to the organizational health framework (Miles, 1965). From there, college know-how and the effectiveness of student success courses and goal development strategies are explored as possible intervention components from a situated learning perspective that considers the context, culture, and opportunities for legitimate peripheral participation. Finally, interventions that leverage technology are considered within the context of the organization's health while exploring how to incorporate situated learning components into a digital intervention. The review concludes with a proposed intervention that suits the context of OTCC and its specific needs and organizational goals.

### Increasing Student Knowledge of and Motivation Toward Program Completion

There is a wide range of research literature that seeks to address the problem of low college completion (Spradlin, Burroughs, Rutkowski, & Lang, 2010). Many studies, however, focus on institutional (Nitecki, 2011) and student characteristics (Porchea et al., 2010) rather than student goals and understanding of completion requirements. The most common interventions employed in higher education to address problems of retention and completion include;

counseling and mentoring; specialized instruction, specifically for first-year students; orientation programs; early warning systems; learning communities; and additional academic support services (Spradlin et al., 2010).

**Campus Culture**

A college's culture can be influenced by its organizational health (Miles, 1965) and specifically by how institutions prioritize their inputs and outcomes. As discussed, dimensions of organizational health (see Fig 3.1) such as communication adequacy, goal focus, and innovativeness can contribute to a college's overall culture based on its motivation and plans to become a more fully functioning system. For example, colleges that foster a culture that promotes student success and completion demonstrate increased rates of students who feel supported both socially and academically (Miller, 2013). Simultaneously, successful campus cultures are also student-centered and emphasize student attention, convenience, and innovation (Miller, 2013). In the examination of community college transfer rates and four-year university retention, Miller (2013) studied Texas community colleges ($n$ = 6) with higher than predicted transfer rates of low SES students, and four-year universities ($n$ = 15) from which the majority of students transferred from predominantly low-income community colleges. Using a mixed methods approach to identify successful institutional practices and outcomes, Miller (2013) used linear regressions to identify institutions with higher than expected outcomes and then conducted five site visits to interview faculty, staff, and students. The author found that campuses that demonstrated high rates of student completion all maintained a customer service attitude in order to meet the needs of students and continuously tried new ideas and approaches (Miller, 2013). These successful campus cultures were widespread and promoted by staff, faculty, and administrators toward a college-wide shared vision of student success.

Fostering a welcoming campus culture is also important given that students who have a sense of belonging, particularly early on in their college career, are less susceptible to attrition (Schuetz, 2005). In a literature review of campus environmental factors relating to community college attrition, Schuetz (2005) found that examples of cultural practices to promote student sense of belonging include clear campus signage to help students find their classrooms, widespread information regarding availability and locations of student services, and innovative ways of connecting with students. The author went on to conclude that community college environment, such as the physical environment, bureaucratic activities, teaching practices, and social and institutional climates must all be taken into consideration when fostering a welcoming and success-oriented campus culture (Schuetz, 2005).

Prior to Miller (2013), Ancess and Ort Wichterle (2001) put forth that schools that prioritize a culture of student success demonstrate positive student outcomes. For example, one public school district in New York implemented the Coalition Campus Schools Project (CCSP) to make completion an integral part of their schools' purpose and design (Ancess & Ort Wichterle, 2001). Specifically, the organization promoted personal bonds between students and faculty, curriculum and instruction that continuously emphasized graduation requirements, intellectual support targeted toward completion, preparing students for life beyond school, and self-organized continuous improvement (Ancess & Ort Wichterle, 2001). Using semi-structured interviews with students ($n$ = 37), teachers ($n$ = 28), and administrators ($n$ = 18); observations of classrooms ($n$ = 15), schools ($n$ = 6), staff meetings ($n$ = 5), and network meetings ($n$ = 6); and document analysis of transcripts, e-mail exchanges, schedules, and meeting notes, the authors explored what practices affect student outcomes (Ancess & Ort Wichterle, 2001). Through qualitative coding and data triangulation, the authors found that schools using the CCSP program

demonstrated higher graduation rates, higher college-going rates of graduates, and decreased drop-out rates compared to non-CCSP Manhattan schools (Ancess & Ort Wichterle, 2001). When considering campus culture, not only are practices such as a customer-service attitude (Miller, 2013), innovative ways of connecting with students (Schuetz, 2005), and making completion integral to school purpose (Ancess & Ort Wichterle, 2001) important, but there are several other components of a campus culture geared toward student success, including but not limited to advising, faculty involvement, and an overall emphasis on degree completion. A key component of a completion-oriented college culture is strategic advising.

**Strategic advising.** Academic advising is often thought to play an important role in student success and degree attainment in higher education (Smith & Allen, 2006) while also allowing students the opportunity for legitimate peripheral participation in the form of identifying their educational goals. In an effort to understand what students want and what they get from academic advising, Smith and Allen (2006) surveyed undergraduate students ($N$ = 2,193) at a doctoral-research intensive urban university. The survey prompted students to rate the importance of and their satisfaction with 12 advising functions that were identified through a literature review (Smith & Allen, 2006). The 12 functions operationalized five constructs that are essential to advising responsibilities: integration functions, such as helping students connect their academic, career, and life goals; referral functions; information functions, such as the ability to give students accurate information; individual functions, such as knowing the student as an individual; and shared responsibility functions, or encouraging students to assume responsibility for their education (Smith & Allen, 2006). Through the use of multiple regression analyses, the authors found that students identified all advising functions as important with particular emphasis on the ability to provide students with accurate information (Smith & Allen, 2006).

However, Smith and Allen (2006) did find differences in importance rating between student race, financial aid recipients and non-recipients, and age, thereby implying that a more strategic approach rather than a one-size-fits-all advising model is most appropriate for college students.

Related to Smith and Allen (2006), Young-Jones, Burt, Dixon, and Hawthorne (2013) explored whether academic advising actually impacts student success as opposed to solely looking at student satisfaction. The authors recruited undergraduate students ($N$ = 611) enrolled in courses within a Midwestern university's Psychology department (Young-Jones et al., 2013). Participants answered survey questions regarding their own behaviors and attitudes towards responsibility, future planning, and decision-making; expectations of advising processes; and demographic information (Young-Jones et al., 2013). Using principal axis factor analysis, multiple regression analyses, and analyses of variance, the authors determined that meeting with advisors directly contributed to student responsibility, self-efficacy, study skills, and perceived supports (Young-Jones et al., 2013). In terms of student success, in a regression using student GPA as the dependent variable and advisor accountability, advisor empowerment, student responsibility, student self-efficacy, student study skills, and perceived support as control variables, the authors found a statistically significant correlation at the .05 level that accounted for 28 percent of the variance in GPA (Young-Jones et al., 2013). Based on their findings, the authors concluded that through effective interactions, appropriate strategies and referrals, and suggested study tips, advisors effectively impact all aspects of students' academic experiences (Young-Jones et al., 2013). These findings suggest that by allowing students to interact with their college's people, activity, and ingredients within its authentic context, organizations can achieve their desired outputs in the form of student success and satisfaction.

Despite the positive findings associated with academic advising and student success, there is a need to make advising services more strategic and useful (Scrivener & Coghlan, 2011). A policy brief written by Scrivener and Coghlan (2011) synthesized the findings of MDRC's large-scale random assignment study in a community college setting. MDRC partnered with six community colleges across the US as part of their Opening Doors Demonstration, and helped develop four distinct programs based on financial incentives, reforms in instructional practices, and enhancements in student services (Scrivener & Coghlan, 2011). MDRC defined student services as academic counseling, career counseling, tutoring, study skills training, and personal counseling (Scrivener & Coghlan, 2011). The Opening Doors Demonstration tested two different enhanced counseling programs: one that provided enhanced academic counseling for students early in their college career and another that provided enhanced services for students that were on academic probation (Scrivener & Coghlan, 2011).

In the program that offered enhanced academic counseling for students early in their college career, two community colleges in northern Ohio targeted low-income students who were new to the college and offered financial incentives to participate in the program over the course of two semesters (Scrivener & Coghlan, 2011). Participants were then assigned to a counselor and were expected to meet with their counselor at least twice per semester to discuss academic progress and any challenges they were experiencing in terms of their schooling. Notably, the counselors in this study were assigned caseloads of approximately 160 students, whereas the national counselor to student ratio is often more than 1,000:1 (Scrivener & Coghlan, 2011). The authors tracked the students' outcomes for three years and compared them to students at the same colleges who did not participate in the Opening Doors program. By the end of the three-year period, the authors found that the enhanced counseling yielded modest positive effects

that dissipated once the program ended (Scrivener & Coghlan, 2011). When compared to the control group, there were somewhat higher rates of retention and credit accumulation, but beyond that, the program did not meaningfully impact students' outcomes (Scrivener & Coghlan, 2011).

The counseling program designed for students that were on academic probation was piloted at Chaffey College outside Los Angeles, California (Scrivener & Coghlan, 2011). Many community college students are put on academic probation due to poor grades and/or inadequate academic progress (Scrivener & Coghlan, 2011). The program comprised a student success course taught by one of the college's counselors and covered topics such as personal motivation, time management, study skills, and college expectations (Scrivener & Coghlan, 2011). Students were also expected to meet with their success course instructor outside of class for academic counseling and to visit the college's success centers for tutoring in reading, writing, and math (Scrivener & Coghlan, 2011). The control group in this study were not targeted for any special services, but had access to the college's standard support services and courses. Initially, the program lasted one semester and attending the course was voluntary, which had no meaningful impact on students' academic outcomes (Scrivener & Coghlan, 2011). Then, Chaffey's administration extended the program over the course of two semesters and made attendance in the success course mandatory. After two semesters, the program increased students' cumulative GPAs and almost doubled the percentage of students who moved off academic probation compared to the control group (Scrivener & Coghlan, 2011). However, the program did not increase student persistence during the follow-up period (Scrivener & Coghlan, 2011). Similar to Smith and Allen (2006) and Young-Jones et al. (2013), the MDRC studies (Scrivener & Coghlan, 2011) demonstrate that counseling services are beneficial in terms of student outcomes,

and further support the organizational health and situated learning frameworks. However, Scrivener and Coghlan's (2011) findings also highlight shortcomings, specifically that the effects of counseling may not be long-lasting. As a result, finding ways to offer more strategic and lasting advising is crucial, and may require more widespread involvement from other college stakeholders such as faculty.

**Faculty involvement.** Given the positive correlation between faculty support and student self-efficacy (Peaslee, 2018) as described in chapter one, creating a campus culture in which faculty members are available and supportive of student goals is an important component of fostering a campus culture that promotes degree completion. Atlantic Cape Community College's Arts and Humanities department designed personalized academic advisement for students seeking degrees within the department's disciplines (McArthur, 2005). Specifically, to increase retention, the Arts and Humanities department supplemented existing advising services through "concerted faculty outreach" (McArthur, 2005, p. 4). In an effort to be more proactive and personalized than the college's scheduling office that is staffed by non-faculty advisors, the Arts and Humanities faculty piloted a letter writing and phone call campaign to each student enrolled in one of the department's four majors (McArthur, 2005). Additionally, the Arts and Humanities faculty received specialized training from a counselor at the college (McArthur, 2005). The department assessed the impact of their efforts through two surveys: one that was distributed to students within Arts and Humanities as well as other Liberal Arts majors in order to have a comparison group ($n$ = 222) and one only for Arts and Humanities students who had received faculty advising ($n$ = 33; McArthur, 2005). The department also used institutional data to track retention over the previous three fall-to-spring registrations. Based on the survey results, McArthur (2005) found that 75.8% of Arts and Humanities majors agreed or strongly agreed that

their faculty advisor cared about their academic progress, compared to only 25.7% of non-Arts and Humanities majors. However, a substantial portion of the findings (McArthur, 2005) suggest that students found faculty members ill-equipped to provide counseling services and unable to provide helpful or accurate information related to graduation requirements, course scheduling, and transfer requirements. That being said, many respondents indicated they felt the faculty member cared about them and were able to discuss career-related topics (McArthur, 2005). Perhaps the most powerful data came in the form of student retention. During the year of the personalized and proactive faculty advising, the Arts and Humanities department saw a 15% increase over the average retention rate of the three previous years (McArthur, 2005). While McArthur's (2005) data indicated that faculty advising was unable to provide the accuracy and depth of information that is required of academic counselors, the retention data and impact on students' sense of belonging and support provides rationale to further explore interventions that include faculty.

In addition to faculty members making contributions to student outcomes, they also serve as leaders within colleges and promote innovative ideas and new programs (Jenkins & Cho, 2013). In a review of colleges and universities that are redesigning programs and support services to create "guided pathways" (Jenkins & Cho, 2013, p. 27) to increase program completion, the authors found several common themes of successful institutions. These themes included; academic programs that have been clearly mapped out by faculty members, embedded advising and feedback from both advisors and faculty, and close cooperation between advisors and faculty to allow for comprehensive student support (Jenkins & Cho, 2013). For example, at Miami Dade College, students demonstrated low rates of completion and faculty determined that students had too many course options, which led to unclear paths that were not aligned with

academic programs (Jenkins & Cho, 2013). To create clearer pathways for students, a committee of 27 faculty members convened. In consultation with their departments and college-wide committees, the committee developed program pathways for Miami Dade's five largest program areas that account for over 80% of degree-seeking students (Jenkins & Cho, 2013). Notably, Miami Dade's efforts were implemented at scale and affected thousands of students as opposed to other interventions that often start small and then attempt to be scaled up (Jenkins & Cho, 2013). Similar to McArthur's (2005) findings on faculty and advisors working in tandem, the pathways designed at Miami Dade would not be feasible without the expertise of both advisors and departmental faculty (Jenkins & Cho, 2013).

Likewise, faculty across their colleges must collaborate to continuously monitor and support students (Jenkins & Cho, 2013). The Integrated Planning and Advising for Student Success (iPASS) initiative, which was launched in 2015 by the Bill and Melinda Gates Foundation and the Helmsley Charitable Trust, provided up to $225,000 to 26 colleges to help them adopt technologies to improve their advising and education planning by 2018 (Klempin, Pellegrino, Lopez, Barnett, & Lawton, 2019). The authors conducted a case study at four participating community colleges to examine the methods and implementation that resulted from the iPASS initiative (Klempin et al., 2019). The case study confirmed that widely-supported advising redesigns involved faculty members either with programming or through updates and frequent communication with the leadership teams tasked with the redesign (Klempin et al., 2019). During the advising redesign at one of the four colleges, Zane State College, project leaders attributed part of their success to widespread buy-in (Klempin et al., 2019). This was achieved through consistent communication, emphasis on intended benefits, and how each initiative contributed to the larger goal (Klempin et al., 2019).

As opposed to McArthur's (2005) study, however, faculty members were not tasked with necessarily learning new skills that were outside their existing job descriptions (Klempin et al., 2019). While students in McArthur's (2005) study appreciated the relationships they built with faculty through advising, Klempin et al.'s (2019) case study demonstrated that faculty can be involved in promoting positive student outcomes in many different ways. In addition to leveraging technology and utilizing evidence-based change management techniques, all four community colleges developed improved advising structures, promoted more transparent communication with stakeholders across their colleges, and experienced increased rates of collaboration between college departments (Klempin et al., 2019). The authors concluded that strategic advising redesigns are "iterative, collaborative, and challenging, calling for multiple stakeholder groups across an institution to break down silos and work together to improve student outcomes" (Klempin et al., 2019, p. 2). Similar to the findings regarding collaboration and faculty buy-in presented by Jenkins and Cho (2013), Klempin et al.'s (2019) findings provide rationale for involving multiple stakeholders at the college to promote a shared emphasis on student completion.

**Emphasis on completion.** As discussed throughout this review, colleges have tried a variety of interventions to increase student completion and one particularly successful example is the Community College of Baltimore County (CCBC; Pierce, 2015). From 2009 to 2015, CCBC was able to increase student completion by 65% through a multifaceted approach (Pierce, 2015). First, all new students were required to complete a seven-week academic development course, which covered topics such as financial aid, tutoring services, and degree requirements. In addition to the new student development course, the college implemented a new student information system that allowed students to access their own degree audits and academic plan,

and made efforts to align the many student support services while tearing down the silos that previously separated them (Pierce, 2015). Finally, CCBC developed accelerated pathways such as those seen at Miami Dade College (Jenkins & Cho, 2013) to allow students to progress more quickly through their required courses (Pierce, 2015). Together, all of these steps transformed the campus culture into one that actively promoted student engagement and completion among its more than 70,000 students.

College culture that promotes student completion is not limited to CCBC, however. In an examination of college completion intention, as opposed to dropout intention, Thomas (2014) surveyed undergraduate students ($N = 260$) at four colleges in the Philippines. The survey collected data related to the constructs of classroom learning environment, perceived institutional support, academic self-efficacy, social support, and college completion intention (Thomas, 2014). Using structural equation modeling, Thomas (2014) determined that students' intention to complete college is directly and significantly affected by their perception of the support from the institution ($p < .05$), their academic self-efficacy ($p < .05$), and the social support they receive ($p < .05$). The author concluded that when institutions make efforts to meet the social and emotional needs of students and help students beyond their academic requirements, students may reciprocate through increased desire to complete college (Thomas, 2014). However, it is crucial to explain to students why program completion is important and beneficial (Bers & Schuetz, 2014).

In their examination of low community college completion rates, Bers and Schuetz (2014) conducted a study focused on students who successfully completed at least one year's worth of college credits, yet did not complete a credential or transfer. The authors used institutional records at one suburban community college to identify students ($N = 359$) who

completed at least 45 units with a 2.0 GPA and left the college after the 2010-2011 year without a degree or certificate (Bers & Schuetz, 2014). Participants were invited to complete a survey that asked about their primary objective for attending college, their educational goal when they first enrolled, sense of connectedness, and whether anyone had discussed with them the importance of earning a credential. Of the 77 responses, 17% reported they withdrew from the community college because they did not see the value in completing a college credential (Bers & Schuetz, 2014). Additionally, only 30% of participants could recall a staff or faculty member discussing with them the importance of completion and degree attainment (Bers & Schuetz, 2014). Despite all study participants acknowledging the value of college credentials with regard to professional opportunities and entering the workforce, they still did not express a sense of urgency in completing their degrees. While fostering a college culture that promotes student success and emphasizes program completion can contribute to student outcomes (Thomas, 2014), it is also crucial to increase students' understanding of their educational options and the various opportunities that a college credential can lead to (Bers & Schuetz, 2014).

Creating a college culture that promotes student completion involves strategic advising (Scrivener & Coghlan, 2011; Smith & Allen, 2006; Young-Jones et al., 2013), faculty involvement (Jenkins & Cho, 2013; Klempin et al., 2019; McArthur, 2005), and an overall emphasis on program completion (Bers & Schuetz, 2014; Pierce, 2015; Thomas, 2014). Together, these factors can lead to logistical improvements such as faculty-developed program pathways and improved advising technology, as well as improved student-faculty relationships and increased student sense of commitment to the institution and program completion. In addition to practices and services that can improve college culture, students must be taught the

skills and know-how to successfully navigate through and complete a community college program (Karp & Bork, 2012).

**Developing College Know-How**

While studying non-academic factors such as attitudes and behaviors that contribute to community college student completion, Karp and Bork (2012) found that college "cultural know-how" (p. 20) is an important component of the community college student identity. Lave and Wenger (1991) discussed the internalization of learning in various cultural contexts and contended that shared cultural systems of meaning are interrelated and help to constitute learning. The component of legitimate peripheral participation of situated learning theory serves as a "conceptual bridge" (Lave & Wenger, 1991, p. 55) that connects learners' knowledge to the characteristics of the community, or in this case, the college. As such, fostering students' college know-how through legitimate peripheral participation allows students to more seamlessly be a part of the college culture and utilize the skills necessary for college completion.

Historically, college readiness was solely equated with academic preparation (Hooker & Brand, 2010). However, further research confirms that a holistic examination of student readiness and success includes academic factors along with psychosocial, sociodemographic, and situational factors (Porchea et al., 2010). In their review of three programs designed to support college and career success for students from underrepresented groups, Hooker and Brand (2010) put forth an expanded definition of college and career readiness. The authors selected these three programs based on the intentional targeting of student's college knowledge through diverse strategies (Hooker & Brand, 2010). In terms of their expanded definition, the authors purported that in addition to the factors that contribute to student success, students must have a comprehensive understanding of the college system and associated expectations (Hooker &

Brand, 2010). One type of intervention, early college high school models, strive to expose students to every aspect of college environments and culture, such as admission requirements, financial aid eligibility, academic requirements, and the cultural and academic differences between secondary and postsecondary education (Hooker & Brand, 2010). The authors reviewed a rigorous experimental study conducted by the University of North Carolina at Greensboro, which tracked the results of students in early college high school programs as well as a control group of students who were not admitted (Hooker & Brand, 2010). Early college high schools are often located on community college campuses, which allow students to experience a college campus, attend college classes, and form relationships with college peers and faculty (Hooker & Brand, 2010). The initial findings showed that ninth grade early college high school students progressed through their college preparatory curriculum at higher rates than the control group and that early college high school graduating classes planned to enroll in college at a higher rate than the national average (Hooker & Brand, 2010). The authors concluded that allowing students to increase their educational aspirations and college knowledge on college campuses is a promising model that warrants further examination (Hooker & Brand, 2010). Similarly, Karp and Bork (2012) explored cultural aspects and college know-how as contributing factors to student success.

Karp and Bork (2012) examined students' need to understand their role as college students through the lens of role theory. The authors operationalized role theory as the roles, or parts people play throughout their lives (Karp & Bork, 2012). In their study, the authors conducted semi-structured interviews with students ($n$ = 96) and faculty and staff ($n$ = 72) at three community colleges in the Virginia Community College System. Using NVivo to analyze the data, Karp and Bork (2012) closely examined the constructs of "expectations of students" (p.

9) and "student needs" (p. 9). The authors presented two main findings. The first finding was that community college students are expected to be self-aware and assess their progress and needs individually, which they are largely unaccustomed to doing (Karp & Bork, 2012). The second finding was that the community college student role is more fluid than other roles, such as professionals and employees, due to being less structured, more flexible, and including fewer forms of clear feedback (Karp & Bork, 2012). Finally, the authors presented the four areas that they indicated make up the community college student role: expectation to engage in new academic habits, need to exhibit cultural know-how, ability to balance the multiple roles, and expectation to engage in timely help-seeking behavior (Karp & Bork, 2012). The authors found "cultural know-how" (Karp & Bork, 2012, p. 20), or the "contextual awareness to understand what is expected of them in given situations, and to determine how to adapt and conform to those expectations" (p. 20), to be an important component of the community college student identity. Similar to legitimate peripheral participation and situated learning theory, cultural know-how as defined by Karp and Bork (2012) is the result of the conceptual bridge between students' previous roles and their new role as a college student. The authors concluded that to prepare students for success in community college, students must be told and ideally shown the explicit expectations of the college (Karp & Bork, 2012). This conclusion therefore supports an intervention that develops students' college know-how through explicit demonstrations and instruction.

Similar to Karp and Bork's (2012) review of interventions for underrepresented groups, Byrd and Macdonald (2005) explored college readiness in first-generation college students. The authors conducted an in-depth phenomenological study with undergraduate, first-generation, community college transfer students ($N$ = 8) over the age of 25 at one small urban university in

the Pacific Northwest (Byrd & Macdonald, 2005). In addition to academic skills, participants identified skills that were necessary for college readiness such as time management, goal focus, and self-advocacy (Byrd & Macdonald, 2005). Similar to Karp and Bork's (2012) findings and Hooker and Brand's (2010) evidence, specific to being non-traditional students based on their age and first-generation status, participants stated that their sense of identity as a college student and their ability to understand and navigate the culture of college were important factors in their success (Byrd & Macdonald, 2005). As with Karp and Bork's (2012) recommendations, the findings of Byrd and Macdonald (2005) confirm the need to explicitly teach time management, goal focus, self-advocacy skills, and cultural norms and practices (see Figure 7) that are present in college settings. The authors suggested two ways to accomplish this: increasing advising and offering student success courses (Byrd & Macdonald, 2005).

**Student success courses.** Community colleges have developed student success courses in an attempt to combat poor academic preparation and low levels of college know-how (Cho & Karp, 2013). These courses typically cover topics such as institutional information, academic and career planning techniques, study skills, and personal habits such as healthy relationships and financial literacy (Cho & Karp, 2013). Using data from the Virginia Community College System (VCCS) and building on prior Florida-based research, Cho and Karp (2013) explored whether student success course enrollment had positive associations with short term student outcomes in the form of earned credits and persistence. Using student record data, the authors identified students ($n$ = 14,807) who enrolled in one of VCCS' three student success courses during summer or fall 2004 and compared their outcomes to students ($n$ = 9,015) who did not enroll in a success course (Cho & Karp, 2013). Using descriptive statistics and regression analyses, the authors analyzed comparisons between the two groups regarding credit accumulation in the first

year and persistence into the second year (Cho & Karp, 2013). The authors found that enrolling in a student success course during their first semester was statistically significant and positively associated ($p < .01$) with both earning credits during their first year and persisting to their second year (Cho & Karp, 2013). In the interest of brevity, the authors primarily explored the outcomes related to student success course enrollment during students' first semester (Cho & Karp, 2013), and these findings could be strengthened by examining the impact of enrolling in a success course at any point during college.

Another study examined student outcomes after enrolling in a success course, but not necessarily completing the course (Zeidenberg, Jenkins, & Calcagno, 2007). Using individual student record data provided by the Florida Department of Education on all students that entered the Florida community college system in fall 1999, the authors tracked the students for 17 academic terms (Zeidenberg et al., 2007). The final sample size was "somewhat less than 37,000 students" (Zeidenberg et al., 2007, p. 2). The authors also controlled for student characteristics that could be attributed to the decision to enroll in a success course, such as gender, race and ethnicity, age, citizenship, English proficiency, and high school diploma as opposed to GED or non-standard diploma (Zeidenberg et al., 2007). Roughly 36% of the sample enrolled in a student success course and approximately 79% of enrollees passed the course with a D or better. Using multivariate models to determine the effect of student success course enrollment on credential attainment within 17 academic terms, the authors concluded that enrolling in a student success course had a marginal positive effect on a student's likelihood of earning a credential, persisting, or transferring when controlling for socioeconomic status and academic readiness (Zeidenberg et al., 2007). While this study did not solely consider course completion, the findings align with those of Cho and Karp (2013) in terms of credit accumulation and persistence. Further, given the

topics typically covered in student success courses (Cho & Karp, 2013), these types of courses have the potential to develop the four areas of student roles presented by Karp and Bork (2012). As a result of these findings, Zeidenberg et al. (2007) encouraged community colleges to consider expanding the requirements that all students enroll in a success course given the positive outcomes.

In addition to the data supporting student outcomes as a result of success courses (Cho & Karp, 2013; Zeidenberg et al., 2007), it is also important to explore the student perspective regarding success courses (O'Gara, Karp, & Hughes, 2009). In a qualitative study of student persistence in community college, O'Gara et al. (2009) explored how institutional support services related to student progress toward a degree. The study took place at two urban community colleges in the northeast US and participants were randomly selected from a list of all first-time enrollees in fall 2005 who persisted to spring 2006 (O'Gara et al., 2009). The authors conducted semi-structured interviews ($n$ = 44) that focused on students' initial experiences in college, their reasons for enrolling in community college, their goals, if they had taken a college success course, and if so, what their perceptions and experiences were in the course (O'Gara et al., 2009). Overall, students described their college success courses as beneficial in several ways such as increasing their knowledge about the institution, gaining academic skills, and helping to create important relationships with peers and professors (O'Gara et al., 2009). Further, students cited that the convenience of the one-stop resource for gaining institutional, academic, and personal information in the form a student success course was more helpful than seeking out those services individually (O'Gara et al., 2009). In addition to gaining knowledge about study skills, time management, how to develop a sense of community within

the college, and campus resources, success courses can serve as a vehicle to help students develop their academic and career goals (Jenkins & Cho, 2013).

**Goal development.** As previously discussed with regard to creating clear program pathways, students with identified goals, particularly within their first year of enrollment, are more likely to complete a program of study and/or transfer (Jenkins & Cho, 2013). As such, supporting students' goal development is an important part of an intervention. In an examination of the association between *judgements of confidence* and goal setting, Hadwin and Webster (2013) studied undergraduate students ($N$ = 170) enrolled in a first-year course designed to promote self-regulated learning. The authors defined judgements of confidence as "evaluations learners make about whether they can successfully answer a question, complete a task, or, in the case of this study, achieve a self-set goal" (Hadwin & Webster, 2013, p. 38). The study comprised a personal planning tool that were diary-like instruments where students actively planned and then reflected on their studying habits once a week for 11 consecutive weeks (Hadwin & Webster, 2013). Each week, students were asked to set a goal related to an upcoming task in one of their university courses and then evaluate the progress of that goal the following week. Students completed Likert-type surveys each week rating their level of confidence in accomplishing their goal, which was then analyzed using multilevel linear modeling. The authors found that ultimately, calibration of goal development did not improve over successive weeks of goal setting and that students became less overconfident relative to their self-evaluations of past goal attainment (Hadwin & Webster, 2013). Additionally, the authors found within-person and between-person differences in judgments of goal attainment, thereby suggesting that other factors may also contribute to students' judgments and goals. Hadwin and Webster (2013) concluded that judgments of confidence are particularly complex in the context of goal setting

and because learners develop their confidence for goal attainment based on prior knowledge, it is important to educate students on all of their academic and career options before expecting them to set clear goals.

Another study explored goal setting and values training, or "programs that help students define, choose, and explore their personal values" (Chase et al., 2013, p. 79), as it related to college student performance. Specifically, Chase et al. (2013) defined goals as "concrete, object-like consequences of action that can be obtained or finished" (p. 79) while values were defined as "qualities intrinsic to action that can be instantiated but not obtained or finished" (p. 79). In a study of 132 college students, participants were randomly assigned to receive an online goal setting program ($n$ = 48), a goal setting plus a values program ($n$ = 51) or received the goal setting program and then the values program one semester later ($n$ = 33). The programs were completed online and took approximately 30-45 minutes to complete. The online program provided participants with information about the importance of setting academic goals and how to set SMART (specific, measurable, achievable, relevant, and time-bound) goals. Using student GPAs maintained by college advisors for pre-experiment, post-experiment, and follow-up one semester later, the authors used a form of mixed regression modeling to determine any effects of the experimental programs on student success (Chase et al., 2013). The researchers found that the values training and behaviorally-based goal setting program significantly increased students' academic performance (Chase et al., 2013). However, there was no impact found for students who only received the goal setting program, prompting the consideration to include both values training and goal setting as part of an intervention.

Lastly, a study at a large European business school explored the results of a scalable online goal setting intervention among first-year college students ($N$ = 703) (Schippers,

Scheepers, & Peterson, 2015). The authors hypothesized that setting life goals would help students enhance their academic performance. Paying particular attention to the role of gender and ethnicity, the authors compared the academic performance of the study sample with three pre-intervention control groups (*n*s = 896, 825, and 720; Schippers et al., 2015). The online goal-setting intervention consisted of three parts. The first part asked students to reflect, daydream, and imagine their future. During this first stage, participants wrote about things they could do better, things they would like to learn more about, and habits they would like to improve (Schippers et al., 2015). The second phased required students to engage in at least 15 minutes of nonstop writing about their ideal future and the future they would like to avoid. Then, students had to identify the steps and goals necessary to achieve their ideal future with consideration to family, intimate relationships, activities outside of work, career, education, and more (Schippers et al., 2015). The intervention culminated in taking a professional headshot combined with a motivational statement that began with the phrase "I WILL". After obtaining gender and ethnicity data through college records, the authors analyzed the progress of students based on credit accumulation and retention. Upon conducting an ANOVA, the researchers found a significant ($p < .001$) increase in number of credits earned for male majority and male minority students (Schippers et al., 2015). Further, $x^2$ analysis on retention revealed significant ($p < .001$) increases for male majority and minority students and marginally significant ($p = .058$) increases for female minority students (Schippers et al., 2015). The authors concluded that in one year, the intervention successfully closed the ethnicity achievement gap by 38% and the gender achievement gap by 98% (Schippers et al., 2015). Given the findings that an inexpensive, scalable, and widely accessible online intervention can have significant impacts on students'

academic achievement and retention, there is a need to further explore the utilization of technology in potential interventions.

Developing college know-how can be achieved by explicitly teaching students about their college's available services and culture (Hooker & Brand, 2010; Karp & Bork, 2012; Byrd & Macdonald, 2005), offering student success courses (Cho & Karp, 2013; Zeidenberg et al., 2007; O'Gara et al., 2009), and helping students identify and develop their goals (Hadwin & Webster, 2013; Chase et al., 2013; Schippers et al., 2015). The literature examined in this section support the importance of developing community college student know-how and highlight the impacts know-how can have on credit accumulation (Zeidenberg et al., 2007), GPA (Chase et al., 2013), and retention (Schippers et al., 2015) and ultimately, program completion (Jenkins & Cho, 2013). The final section of the intervention literature review considers how to foster a college culture of student success and develop college know-how through an intervention that leverages technology.

**Leveraging Technology**

From an organizational health perspective (Miles, 1965), due to limited financial resources, human capital, and time, developing an intervention that leverages technology to increase student knowledge of program completion and available support services is an appealing strategy for a community college attempting to make system-wide improvements in student outcomes (Mayer et al., 2019). In addition to Klempin et al.'s (2019) case study, Mayer et al. (2019) also examined the effects of iPASS and specifically how technology can support college advising redesign. The purpose of iPASS is to increase advising programs' attention to early warning signs, referrals to support services, regular follow-up with students, and to provide personalized guidance reflective of each individual student (Mayer et al., 2019). The authors

partnered with three colleges across the US to evaluate the results of their iPASS implementation using a randomized control trial research design (Mayer et al., 2019). The randomized control trial was conducted by enrolling students through passive consent, or wherein participants were included in the sample unless they explicitly opted out, and randomly assigning them to two semesters of technology-enhanced iPASS advising ($n$ = 3,760) or the college's typical advising services ($n$ = 4,251; Mayer et al., 2019). Specifically, these three colleges "increased the emphasis on providing timely support, boosted their use of advising technologies, and used administrative and communication strategies to increase student contact with advisers" (Mayer et al., 2019, p. iii).

Much of the boosted technologies were in the form of student information systems that allowed students to review their degree progress in live time, early alert warning systems for advisors and students, and online scheduling systems for students to meet with their advisors (Mayer et al., 2019). The authors found that program participants at the three colleges received considerably more communications from advisors and had more meetings with advisors, but the program had no statistically significant impacts on students' academic performance or short-term educational outcomes (Mayer et al., 2019). The results at one of the colleges even showed a slightly negative estimated effect on students' academic progress and a statistically significant reduction in both credits attempted and credits earned, likely due to the college's hold on registration unless students met with an advisor (Mayer et al., 2019). While the iPASS initiative has yet to demonstrate positive outcomes, the institutions piloting the program have reported improvements in making data available across their organizations and in experimenting with new strategies to utilize technology in meeting student needs (Mayer et al., 2019). Given the initial findings of iPASS, it is important to consider how community colleges can leverage technology

to increase student success while still considering the culture, participation, and context in which the learning is situated.

**Situated learning.** Revisiting the work of Lave and Wenger (1991; see Figure 7), there are several aspects of situated learning that should be considered in creating a digital student success intervention. As is characteristic of situated learning, designing an intervention that allows for authentic context, authentic activities, access to modeling, and promotes collaboration and reflection are all important facets of the intervention (Hossainy, Zare, Hormozi, Shaghaghi, & Kaveh, 2012). The Hossainy et al. (2012) study implemented a situated learning intervention to measure learning and motivation of students in a university-level psychopathology course ($n$ = 18) while another section of students in the same course received a control group lecture-based curriculum ($n$ = 16). The intervention group received the course content via video demonstrations, stories related to the context, and clinical interviews with step-by-step descriptions. Specifically, the video demonstrations of role playing between students and a trained professional were used to address learning in an authentic context and authentic activities were performed in the class' online discussion groups and email (Hossainy, et al., 2012). In comparing the results of the pre- and post-tests given to both groups of participants, the researchers determined there were significant increases ($p < .001$) in the mean of academic achievement in the situated learning intervention group. This finding confirmed that situated learning, compared to lecture-based instruction, increased students' academic achievement in the study environment (Hossainy et al., 2012). When examining school motivation, intrinsic motivation, and extrinsic motivation, as measured using the McInerney and Sinclair inventory of school motivation, the researchers found significant ($p < .001$) increases in school motivation and intrinsic motivation, and no difference in extrinsic motivation for the situated learning group.

Alternatively, there were no differences in motivation levels in the control group (Hossainy et al., 2012). As such, the researchers concluded that not only did situated learning increase school motivation, it did so from intrinsic motives.

Another study explored the impact of situated learning, specifically through the mode of learning communities, to assess students' access and motivation for participating in the community, the meaning of their experiences, and their learning trajectories (Priest et al., 2016). While the learning communities were conducted as a cohort model of students who enrolled in three classes together, the instructional practices were grounded in situated learning theory. The study participants ($N = 103$) completed an online survey to collect both quantitative and qualitative data (Priest et al., 2016). The researchers found that college advisors were the primary source in supporting students' access to learning communities (Priest et al., 2016). At the same time, due to the situated learning nature of the intervention, students were able to develop meaningful connections to their peers, the academic content, their instructors, and the university as a whole. The situated learning experiences emboldened students to consider or make decisions regarding their educational trajectory (Priest et al., 2016). Finally, given the findings regarding the importance of strategic advising (Scrivener & Coghlan, 2011) coupled with leveraged technology to support the organization's health, e-advising may be an important component of a digital student success intervention.

**E-advising.** Traditionally, college advising occurs on campus in face-to-face meetings between students and advisors where an individual plan is created toward the student's goal (Phillips, 2013). This method of advising closely aligns with situated learning theory given the authentic context in which the advising takes place as well as students' legitimate peripheral participation in their educational plan. However, this model of advising can be inefficient, highly

subject to human error, expensive, and often a source of student dissatisfaction (Hart, 2019; Phillips, 2013). Arizona State University (ASU) has a comprehensive advising system in place, called eAdvisor, that both students and the university use to determine academic pathways, program requirements, and which courses need to be offered based on student need (Phillips, 2013). In their review of ASU's eAdvisor program, Phillips (2013) evaluated how prior to eAdvisor, students did not have regular access to major exploration resources to help them decide what area to major in, and were unable to track their academic progress. The e-advising system is also able to identify students by major who are struggling in their prerequisite courses and provide an early alert warning to advisors that the student may need additional supports (Phillips, 2013). As such, eAdvisor does not replace the need and role of human advisors, but rather supplements their work and is available for students to constantly review their progress. Overall, leveraging technology into advising has benefited both students and advisors and supports the university in making data-informed decisions (Phillips, 2013). In addition to supporting on-campus students, e-advising allows support services to be available regardless of the student's location.

E-advising is becoming more popular as online student populations continue to increase (Waldner, McDaniel, & Widener, 2011). This is particularly true at OTCC; the online location is currently the only campus site at OTCC that is experiencing an increase in enrollment (California Community College Colleges Chancellor's Office, 2019). In their article discussing the concept and need for faculty e-advising, Waldner et al. (2011) purported that e-advising provides the same advising opportunities as face-to-face meetings, yet can be done from any location with internet access. Further, e-advising is also frequently utilized by local students who find the online accessibility to be more conducive to work and personal schedules (Waldner et al., 2011).

Currently, institutions utilize services such as Skype, Google Talk, and Zoom to conduct e-advising sessions (Waldner et al., 2011). Given that meeting with an advisor is a requirement at many institutions, offering e-advising benefits students and promotes their academic success regardless of physical location (Waldner et al., 2011). One unique component of e-advising is a virtual learning environment (VLE; Waldner et al., 2011). The authors defined a VLE as a platform to launch e-advising and is very similar to online courses taught through platforms such as Blackboard, Canvas, and Moodle (Waldner et al., 2011). The authors proffered that in addition to live e-advising sessions, a VLE can display general information, PowerPoint presentations, and links to videos regarding a variety of student services and can be accessed at any given time (Waldner et al., 2011). Individual advisors can also modify their VLEs based on program-specific requirements or unique student populations under their purview. In doing so, advisors can upload helpful visual aids to assist students through institutional processes, such as how to register for classes, how to pay tuition, or how to order official transcripts. Between live interactions with advisors and the utilization of VLEs, students can receive the same quality of advising regardless of their physical location (Waldner et al., 2011).

As more colleges offer online classes, Burns, Kimmel, and DiScale (2019) conducted a case study of one library and information studies program's e-advising services, particularly from student perspectives. To address some common barriers to online learning, the program designed e-advising services which included a new e-advisor faculty position who was responsible for maintaining contact with students from admission through graduation (Burns et al., 2019). To explore the effects of an e-advising model, the authors developed a survey to gather student beliefs and perceptions of the program's advising structure (Burns et al., 2019). Participants were enrolled in an online, asynchronous master's of education program that led to

state licensure in school librarianship and were recruited via convenience sampling ($N$ = 75). Using descriptive statistics and content analysis of open-ended questions, Burns et al. (2019) found that students sought out the faculty e-advisor primarily for assistance with their plan of study ($n$ = 58), assistance with registration ($n$ = 46), and other program related issues and inquiries ($n$ = 36). Participants expressed that their relationship with the e-advisor helped them establish a deeper connection to the program, despite it being online and asynchronous (Burns et al., 2019). The benefits of e-advising and online advising resources are not solely applicable to online-only students, however.

Digital supports, such as VLEs can teach students to self-advise to a certain extent (Kalamkarian & Karp, 2015). While e-advising should be regarded as a means not an end and is not meant to supplant in-person advising services, increasing student knowledge and awareness of general requirements prior to meeting with an advisor can lead to a richer and more productive advising session (Kalamkarian & Karp, 2015). For example, in a study using focus group interview data from students ($N$ = 69) across six US colleges that vary in urbanicity and type, Kalamkarian and Karp (2015) explored student attitudes toward technology-mediated advising. Qualitative data coding revealed that students wanted advisor support to learn how to approach complex educational problems, such as how to create an academic plan and prepare for their careers (Kalamkarian & Karp, 2015). Additionally, while students appreciated more administrative and technical support via technology, they still preferred in-person advising for cognitive support (Kalamkarian & Karp, 2015). Overall, the authors found that students prefer an interactive advising-as-teaching approach that allow students to be part of their education decision-making (Kalamkarian & Karp, 2015). In particular, students were wary of technology-based advising for tasks such as planning their schedules and techniques for being successful in a

college environment, highlighting the importance of not using e-advising to supplant in-person services (Kalamkarian & Karp, 2015). While Kalamkarian and Karp's (2015) findings somewhat contradict those of Burns et al. (2019), it is important to consider undergraduate versus graduate programs, and fully online programs versus in-person colleges when designing e-advising services.

When considering an intervention that leverages technology to lead to increased student program completion, it is important to consider what these services are meant to accomplish and how student learning is situated within the context of a community college. For example, data suggest that prohibiting students from enrolling unless they have met with an advisor actually has a statistically significant negative impact on credits attempted and earned (Mayer et al., 2019), and trying to offer all types of advising online and asynchronously may actually alienate students from the college environment (Kalamkarian & Karp, 2015). That being said, offering digital advising services not only provides a convenient way for students to access college services (Waldner et al., 2011) but can in fact lead to feelings of belonging and a sense of community, particularly for exclusively online students (Burns et al., 2019). Finally, based on the findings that situated learning interventions can increase academic achievement, motivation, and students' connectedness to the college as a whole (Hossainy, et al., 2012), considering the context, culture, and student participation is key to a successful intervention. As such, an intervention to address the needs at OTCC could employ e-advising methods to accomplish advising-as-teaching (Kalamkarian & Karp, 2015) through a situated learning format, while continuing to offer comprehensive academic counseling services in a face-to-face format.

## Brief Summary of the Proposed Intervention

The needs assessment study results suggest that OTCC should address the lack of understanding regarding program completion requirements, the notion that seeking out support services can be challenging and inconvenient, and the disparity in students' perspectives of success versus the institution and the chancellor's office. While OTCC currently offers new student orientation as well as a variety of student success courses, both are optional, and their lasting impacts are unknown. In order to promote organizational health within OTCC and meet the metrics of the Student Centered Funding Formula, OTCC must demonstrate increased rates of program completion. For the purposes of this intervention, the researcher is interested in exploring how to leverage technology beyond academic counselors' offices and into classrooms in an effort to reach the greatest number of students. In considering the theoretical frameworks guiding this intervention, it is important to consider the qualities of situated learning in relation to a digital student success intervention. Further, from an organizational health perspective (Miles, 1965), it is advantageous for OTCC to meet the needs of its current students and to promote its goal focus through increased communication and innovation. E-advising provides many of the same advising opportunities as face-to-face meetings, yet can be done from any location with internet access. Specifically, there is the opportunity for the college to create a VLE as described by Waldner et al. (2011) to offer short video modules on a range of advising topics such as program completion, registration processes, and transfer requirements.

The video modules would also reference services that are already available to students and serve as a form of a VLE (Waldner et al., 2011). Importantly, the video modules are not meant to replace the critical role that academic counselors play at OTCC, but rather to support student success as an advising-as-teaching method, as described by Kalamkarian and Karp

(2015). To incorporate components of situated learning, not only would students be learning this information in the context of the college, but the video modules would demonstrate modeling of various tools such as degree audits and course registration. Between the informational video modules and reference to relevant support services at the college, this intervention has the potential to increase student knowledge regarding program requirements, explain how student success is defined at the community college, demonstrate how to access available support services, and ultimately increase OTCC student completion rates.

## Conclusion

Completing college degrees are associated with increased levels of human capital and afford individuals better opportunities economically, socially, and politically (Bowen et al., 2009). Community colleges serve as affordable and open-access institutions that thereby contribute to the aforementioned increased levels of human capital (Boggs, 2011). However, the low rates of program completion and transfer are concerning for both individuals' prospects as well as the organizational health of community colleges. Using research-based approaches to address issues of campus culture, student knowledge, and student motivation is potentially far-reaching given that low rates of community college completion are pervasive across the United States (National Student Clearinghouse, 2019).

The review of the research literature highlighted strategic advising strategies (Smith & Allen, 2006) and methods to leverage technology (Mayer et al., 2019) to reach the largest number of students while providing accurate and helpful information. By contributing to students' understanding of their educational options and promoting college services that are already in existence, OTCC can foster a college culture that encourages student success and program completion. As a result of increased program completion, OTCC will receive increased

levels of funding (California Community College Chancellor's Office, 2018) and students will experience increased opportunities personally (Bowen et al., 2009) and professionally (Bureau of Labor Statistics, 2019).

## Chapter 4: Intervention Procedure and Program Evaluation Methodology

Low rates of community college completion remain cause for concern given the personal and professional opportunities a higher education credential affords individuals (Bowen et al., 2009) as well as the institutional funding that is tied to rates of completion (California Community College Chancellor's Office, 2018). The recent implementation of the Student Centered Funding Formula across community colleges in California has left OTCC in the San Francisco Bay Area highly dependent upon student completion of certificates and degrees and transfer to four-year universities (California Community College Chancellor's Office, 2018). A needs assessment to identify the relevant barriers to student completion was conducted at OTCC during the spring 2019 semester and three primary themes emerged: 1) student understanding of certificate and degree requirements, 2) students find seeking out support services can be challenging, 3) definition of success for students does not align with the chancellor's office metrics.

After a review of relevant research literature on possible interventions, several options were identified for addressing student knowledge, student goal identification, and promotion of existing institutional services. A program comprised of strategic advising techniques (Allen et al., 2013) in a digital format with content similar to that of college success courses and new student orientations (Cho & Karp, 2013) was deemed most feasible in the context of the study. Additionally, based on findings from the needs assessment as well as the research literature (Nitecki, 2011), this intervention intends to serve as a single platform that students can access for a wide range of information related to their academic, career, and social/emotional needs as opposed to the multiple and siloed systems currently in place at OTCC. The study in this chapter describes a student support program comprised of informational video modules aimed at

increasing student knowledge, aligning student goals with the chancellor's office metrics, and ultimately increasing student completion at OTCC via direct instruction, modeling, and assessments that determine knowledge generation (see Figure 8).

The intervention was comprised of three informational videos on topics including available support services at OTCC, degree and certificate requirements, transfer requirements, the definition of program success, and the various ways to meet those metrics, in an attempt to consolidate student resources into one user-friendly platform. By providing relevant information in one place, the video modules, the researcher hopes that this platform can eventually be used across OTCC as a resource and tool for all students. The videos were presented in the context of two online, degree-applicable, transferable counseling courses taught by the researcher's colleague during the fall 2020 semester. The research literature suggests that community college students must be explicitly told, and ideally shown, the expectations and requirements in college (Karp & Bork, 2012) as well as taught important skills such as time management and self-advocacy (Byrd & Macdonald, 2005). The literature also suggests that teaching and showing students what is necessary for their success as a college student can be accomplished through increased advising and success courses (Byrd & Macdonald, 2005). However, enrolling in success courses at OTCC is entirely voluntary and many of the currently offered success courses are not degree-applicable, and therefore are relatively unappealing to students who intend to complete their degree and/or transfer in two years. As such, by providing informational videos to students enrolled in classes other than college success courses, there is the increased potential to reach a larger number of students and introduce or revisit important information. The intervention described in this chapter draws from research on strategic advising techniques (Smith & Allen, 2006) and ways to leverage technology (Mayer et al., 2019) to create an

informative and research-backed program to increase student knowledge and goal development and ultimately the health of the organization (Miles, 1965).

## Purpose of the Study

The purpose of this study was to determine the extent to which participation in an informational video module program affected student knowledge regarding program completion requirements, available support services, and the ways in which student success is defined at the college level. Additionally, the study assessed if the digital format of delivery was relevant and helpful to students to determine widespread usability. The research study explored five research questions, which addressed both process and outcome evaluation components:

RQ1. To what extent was the program implemented as designed?

RQ2. In what ways do the contents of the video modules effectively align with and coordinate with related agencies and services?

RQ3. How do participants describe their experience in the program?

RQ4. In what ways did the video modules affect student understanding of program completion?

RQ5. In what ways did this intervention affect students' educational goals?

## Research Design

This intervention followed a convergent parallel mixed methods design (Creswell & Plano-Clark, 2018) as the researcher intended to bring together the results of the quantitative and qualitative data analysis to be further compared and combined. The convergent design was well-suited for this intervention given the time constraints of implementing the intervention and collecting the data over the course of one semester (Creswell & Plano-Clark, 2018). A mixed

methods design also allowed for more robust arguments, potentially more reliable findings, and the opportunity to triangulate data between data sources and the literature (Dougherty, 2017).

**Process Evaluation**

Process evaluations allow for the assessment of how an intervention was both conducted and received (Baranowski & Stables, 2000). Process evaluation methods highlight quality control, quality assurance, descriptions of the intervention, and outcome explanations (Baranowksi & Stables, 2000; Dusenbury, Brannigan, Falco, & Hansen, 2003). Key components of process evaluation include:

> *Recruitment* and *maintenance* of participants, *context* within which the program functions, *resources* available to the program and the participants, *implementation* of the program, *reach* of materials into (or receipt by) the target group, *barriers* to implementing the program, *initial use* of program activities, *continued use* of program specified activities, and *contamination* of treatment and control groups. (Baranowski & Stables, 2003, p. 171)

Another important component of process evaluation is implementation fidelity (Dusebury et al., 2003, p. 238). To mitigate Type III errors, or correctly rejecting the null hypothesis but for the wrong reasons, researchers need to examine implementation fidelity and determine the extent to which the planned intervention aligned to the actual implementation. Without this investigation of implementation fidelity, researchers risk incorrectly attributing outcomes to their planned interventions (Dusenbury et al., 2003). Additionally, examining implementation fidelity helps to explain how an intervention did and did not succeed and the extent of feasibility of a proposed intervention plan (Dusenbury et al., 2003). Implementation fidelity includes adherence, dose, quality of delivery, participant responsiveness, and program differentiation (Dane & Schneider,

1998). In this study, the researcher examined adherence, context, and quality of delivery as the primary constructs that guided the process evaluation (see Table 4). These three constructs were examined to specifically determine the relevance to students and potential for widespread usability. However, aspects of dose, participant responsiveness, and program differentiation are considered when evaluating participant experience, quality of delivery, and limitations as discussed in chapter five.

Table 4

*Process Evaluation Data Collection Matrix*

| Research Question | Construct | Data Source(s) | Measures | Data Analysis |
|---|---|---|---|---|
| To what extent was the program implemented as designed? | Adherence | Researcher | Intervention program plans | Descriptive statistics |
| In what ways do the contents of the video modules effectively align with and coordinate with related agencies and services? | Context | Researcher; participants | Document analysis; focus groups | Descriptive statistics |
| How do participants describe their experience in the program? | Quality of delivery | Participants | Retrospective pretests; focus groups | Emergent coding and thematic analysis |

Program adherence refers to the extent in which the program implementation follows the planned activities and methods (Dusenbury et al., 2003). The objectives of evaluating the process implementation and assessing implementation adherence are to determine if the activities are being carried out as planned and if any adjustments are needed (Zhang et al., 2011). Given that

the Theory of Treatment (ToT; see Appendix H) and logic model (see Figure 8) built on the needs assessment findings and served as models for what the program was expected to do, they were particularly relevant to assessing adherence (Rossi, Lipsey, & Henry, 2019). With regard to the video module program, some goals of the implementation were to have at least 35 participants, present all three video modules in a situated learning environment, and collect retrospective pretests and open-ended responses from participants after viewing each video. In measuring project adherence, descriptive statistics confirmed the number of participants, the dose received (Rossi, Lipsey, & Henry, 2019) or the number of videos presented, and the number of survey responses received (see Table 9).

Context refers to the aspects of an environment of an intervention (Baranowski & Stables, 2000). The context of this program was at a community college in the San Francisco Bay Area, specifically within an online class setting. With regard to research question two, the purpose of the video modules was to align with and further promote existing services and programs within the community college. Additionally, the logistics of how and when the selected topics were presented strongly related to the context of the institution. For example, students received information regarding support services and various student services at the beginning of the semester rather than the end of the semester for the highest likelihood of utilization. Another example of aligning the content with the context was by presenting degree and transfer requirements at a similar time as the college offered transfer application workshops. In terms of constructs, qualitative data were used to identify types of contextual factors that may have affected the program while quantitative data represented levels on those contextual factors (Baranowski & Stables, 2000; Stufflebeam, 2003). As indicated in the ToT (see Appendix H)

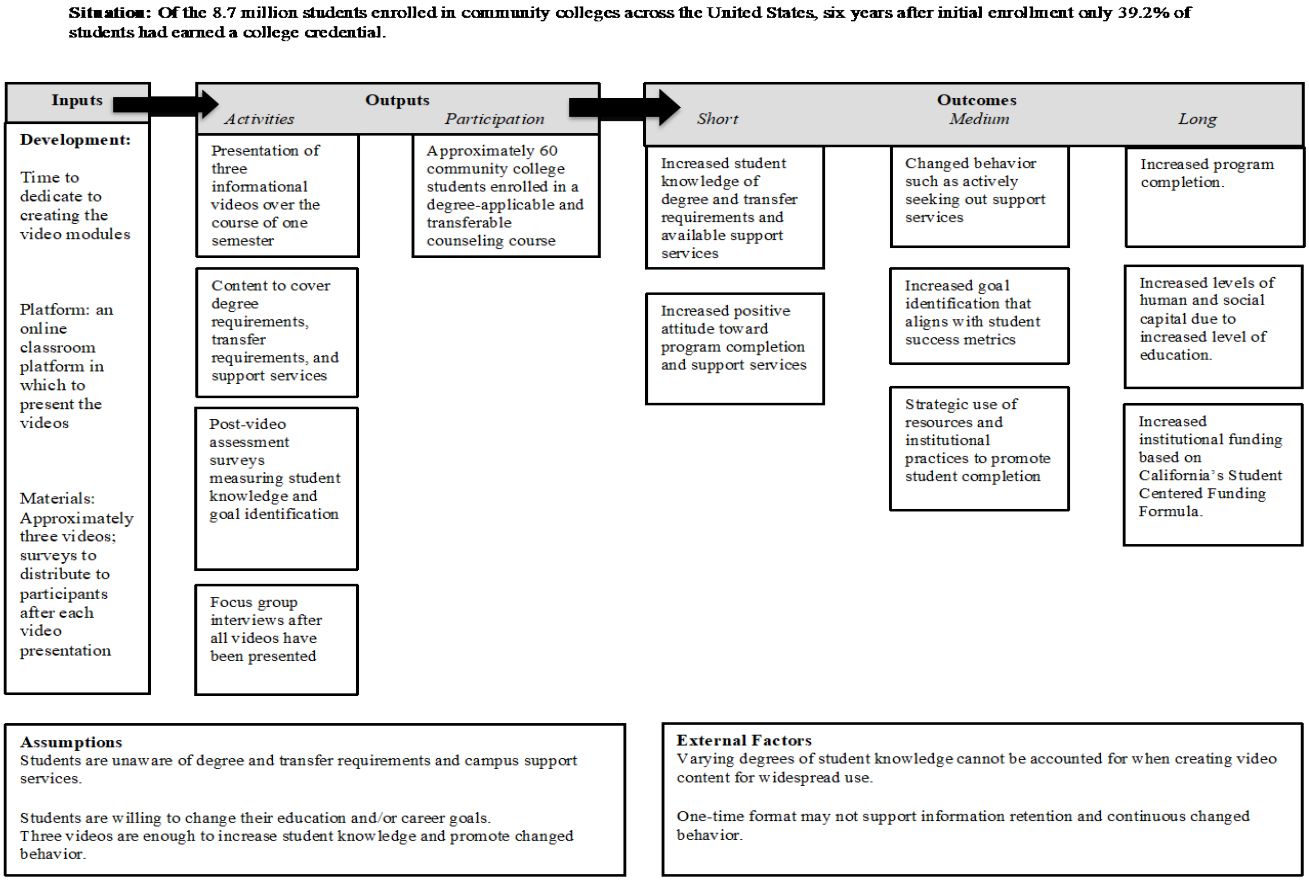



*Figure 8.* Logic model.

and logic model (see Figure 8), the contents of the program aligned with the context and related contextual factors, resulting in anticipated outcomes such as increased knowledge and increased positive attitudes toward accessing support services.

Assessing the quality of the program delivery and participant experiences as part of the process evaluation provided important information about implementation fidelity (Dusenbury et al., 2003). Quality of delivery can be defined in many ways as it relates to provider effectiveness and participant responsiveness (Dusenbury et al., 2003). In terms of the process evaluation, quality of delivery referred to the quality of the video modules themselves, which was determined by evaluating the open-ended retrospective pretest questions regarding what was

most and least helpful in the videos (see Appendices I, J, & K) and the focus group interview questions regarding relevance and the most and least helpful aspects of the videos (see Appendix L). Quality of delivery also refers to the quality of logistics, such as at what point in class the videos were shown, were participants given the opportunity to reflect and ask questions, and were the modules engaging and easy to understand? These logistical factors are also closely related to the previously discussed contextual relevance. For example, the researcher and course instructor uploaded the video modules during weeks in which the class had no other assignments so that watching the videos and completing the retrospective pretests would be manageable for students. To evaluate context, the researcher conducted document analysis to determine how well the video modules aligned with and complemented other college services. The examined resources included departmental websites, workshop invitations, and calendars of events for various offices and programs. To evaluate the quality of delivery, the researcher analyzed the retrospective pretest responses regarding what was most and least helpful as well as the focus group data regarding relevance and helpfulness.

Analysis of the Canvas course, institutional resources, and the focus group interview data revealed there was adherence, contextual relevance, and moderate quality of delivery to the implementation. With regard to context, the video module on available support services included both links and phone numbers to contact each individual office and was also activated in Canvas at a time when student health services and the financial aid office were offering workshops for students. The video module regarding degree requirements and transferring was activated in Canvas approximately six weeks before transfer applications were due and included direct links to sign up for application workshops via the college's transfer center. Additionally, based on the qualitative retrospective pretest data and the focus group data, participants found the videos to be

helpful and relevant and even accessed support services as a result of the intervention content. While some students reported the videos were not relevant to their specific goal or were about topics they already understood, others reported that the videos served as a helpful reminder even for information that they had already heard elsewhere.

**Outcome Evaluation**

Treatment theory allows for the examination of process outcomes within the black box of an intervention (Leviton & Lipsey, 2007). Four components of treatment theory include; defining the problem and which aspects are treatable, identifying the key inputs, the phases of the transformation process, and identifying the expected outputs (See Appendix H; Leviton & Lipsey, 2007). The key elements of this intervention were each of the video modules, the retrospective pretests, and the student participants. As noted in the logic model, the anticipated proximal outcomes included increased positive attitude toward accessing support services and increased knowledge of degree requirements. Medium-term outcomes included increased goal identification that aligns with the chancellor's office metrics of student success and increased utilization of support services. The distal outcomes included increased program completion and subsequent increased college funding as well as improved methods for promoting student success and increased levels of social capital for college graduates (see Appendix F). Finally, executing a mixed methods study led to a deeper investigation of the intervention, allowed the researcher to tell a fuller story, and led to more reliable findings as a result of utilizing multiple methodologies (Dougherty, 2017). The following section describes the rationale and components of the study.

**Convergent design.** The strengths of the convergent design in this context allowed the researcher to independently collect both types of data simultaneously and then combine the

findings to draw connections and disparities (Creswell & Plano-Clark, 2018). There were also several challenges and limitations associated with the convergent design. First, merging quantitative and qualitative data can be challenging and result in difficulties presenting cohesive results (Creswell & Plano-Clark, 2018). In order to successfully merge the two data types, it was important to utilize research instruments that addressed the same concepts and factors, in this case, retrospective pretests and an interview protocol that both examined relevance, helpfulness, and participant knowledge generation (Creswell & Plano-Clark, 2018). Second, merging two data sources may result in divergent findings. While divergent findings can provide new insights into the identified problem of practice, for the purposes of this study, they are likely unresolvable without collecting additional data (Creswell & Plano-Clark, 2018).

By utilizing retrospective pretest and focus group interview data, the researcher endeavored to gain both greater depth and greater breadth, which in turn led to stronger inferences (Teddlie & Tashakkori, 2003). While drawing inferences from the findings, it remained crucial to consider the cultural context and the researcher's own interpretations and bias (Teddlie & Tashakkori, 2003). However, assuming the intervention was implemented with a high level of implementation fidelity, the mixed methods approach allowed for inferences on whether the intervention increased student knowledge regarding program completion requirements, and if so, to what extent. Additionally, combining the qualitative and quantitative results allowed the researcher to draw inferences related to participants' educational goals. However, particularly with regard to the fifth research question, there are a myriad of factors that could have simultaneously influenced a student's educational goal that could have occurred prior to or in tandem to the intervention and it was important to clarify through open-ended

retrospective pretest questions and focus group interviews the role that the intervention played versus other external factors.

This intervention was presented in two online courses at OTCC, each with a maximum enrollment size of 35 for a total possible sample size of 70 participants. With regard to internal validity, the researcher assessed if the intervention made a significant difference in this context (Shadish, Cook, & Campbell, 2002). In terms of external validity, the researcher assessed to which populations and settings the findings could be generalized (Shadish et al., 2002). In considering threats to validity, the first type of threat to consider was a Type I error, or an incorrect conclusion that the cause and effect covary when they actually do not (Shadish et al., 2002). As previously discussed, co-occurring factors and information shared in different contexts may have affected participants' knowledge and goals but may not be as a result of watching the video modules. As such, in conducting statistical analyses, it was important to retain the perspective that even nonsignificant results do not imply zero effect (Shadish et al., 2002). Another threat to internal validity related to participant selection. While all participants were enrolled in one of two selected counseling courses, each participant had varying levels of knowledge regarding program completion and a wide range of self-identified educational goals prior to the intervention, which may have affected the perceived outcomes (Shadish et al., 2002).

## Methods

The following section describes the participants, measures, and instrumentation.

### Participants

The target population for this study were current OTCC students enrolled in a degree-applicable, transferable counseling course. The sample included both full-time and part-time students, and participants varied in terms of age, gender, length of enrollment at OTCC,

educational experiences, goals, majors, and ability. The videos were presented through the fall 2020 semester in two courses taught within OTCC's counseling discipline, where each course had a maximum enrollment of 35 for a total possible sample size of 70 students. The final sample included 53 students who watched at least one video and completed at least one retrospective pretest and 22 students who watched all three videos and completed all three retrospective pretests.

Participants were recruited by the researcher via a colleague's counseling classes. Students were informed that their participation in the study was completely voluntary and had no bearing on their grade in the course (see Appendices M & N). The researcher presented this intervention as a potentially helpful resource that students could access for information regarding campus resources and program requirements. Both classes were taught fully online and entirely asynchronously due to OTCC's course requirements during the COVID-19 pandemic, and as such, the videos were designed to be viewed without any introduction and could be viewed at any time once they were uploaded to the course's learning management system, Canvas. Students were invited to participate in the study via email and an announcement posted on the course's Canvas site. Both the videos and retrospective pretest links could be accessed via the Canvas course that contained all other course materials. Participants were also informed via email and Canvas announcement that their instructor was available during regularly scheduled office hours to discuss the contents of the videos and any immediate questions and feedback.

**Measures and Instrumentation**

Given that the goal of this intervention was to provide a vehicle for educating and training community college students on completion requirements and accessing support services (see Appendix F), the purpose of the evaluation was to determine the effectiveness of using

videos to train students about OTCC's program requirements and available support services. Specifically, the assessment focused on student learning after each video presentation and at the completion of the study (see Table 5).

Table 5

*Outcome Evaluation Data Collection Matrix*

| Research Question | Construct | Data Source(s) | Measures | Data Analysis |
|---|---|---|---|---|
| In what ways did the video modules affect student understanding of program completion? | Participant level of knowledge | Participants | Retrospective pretests; focus groups | Matched pairs t-testing; thematic analysis |
| In what ways did this intervention affect students' educational goals? | Participant understanding of educational options; participant goal identification | Participants | Retrospective pretests; focus groups | Matched pairs t-testing; thematic analysis |

Historically, training effectiveness has been measured through two methods: participant self-report questionnaires and behavioral observations (Sandoval-Lucero, Antony, & Hepworth, 2017). However, using the classic pretest/posttest method for self-report assessments has, in some instances, been unreliable in measuring training outcomes for two primary reasons: participants often have limited knowledge regarding the construct being measured and as a result are unable to accurately assess their prior knowledge, and because participants often underestimate training benefits (Sandoval-Lucero et al., 2017). Admittedly, participants may also overrate their knowledge or skills during the pretest, which can inadvertently appear as decreased knowledge after the training when participants can more accurately assess their pre- and post-

training knowledge (e.g. Hill, 2020; Sandoval-Lucero, 2017). This phenomenon of participant shift in pretest assessment after training is known as response-shift bias (e.g. Hill, 2020; Lucero-Sandoval et al., 2017) and has been identified in studies that used pretests and posttests to assess training outcomes, which may have resulted in inaccurate outcomes.

One method used to mitigate response-shift bias is that of retrospective pretests (e.g. Hill, 2020; Lucero-Sandoval et al., 2017). In using a retrospective pretest, also referred to as a "thentest" (Hill, 2020, p. 185), participants are asked at the end of a program to rate their performance at the beginning of the program as well as their performance now at the completion of the program. There are several formats in which retrospective pretests are offered: a) researchers administer the pretest first and then the posttest on separate forms, b) employ the opposite with the posttest first followed by the retrospective pretest, c) ask for a rating "now" and "then" on the same line (Hill, 2020; see Table 6).

Table 6

*Retrospective Pretest Sample*

| Now | Then |
|---|---|
| __ Strongly disagree | __ Strongly disagree |
| __ Disagree | __ Disagree |
| __ Neither agree nor disagree | __ Neither agree nor disagree |
| __ Agree | __ Agree |
| __ Strongly agree | __ Strongly agree |

Adapted from "Back to the Future: Considerations in Use and Reporting of the Retrospective Pretest," by L. G. Hill, 2020, *International Journal of Behavioral Development, 44*(2), p. 185. Copyright 2020 by Sage.

The retrospective pretests used in this study measured student knowledge, attitudes, and beliefs, and were primarily based on the New Student Orientation Assessment (NSOA; Sandoval-Lucero et al., 2017) with permission from the authors. The authors of the NSOA developed the survey based on their own experiences with program assessment as well as two bodies of literature (Sandoval-Lucero et al., 2017). Specifically, the authors examined the literature on assessment of student learning and self-report assessment of training outcomes (Sandoval-Lucero et al., 2017). Additionally, the survey authors considered the college completion agenda and the importance of student outcomes, particularly for community colleges. The authors' assessment plan included the areas of student learning in orientation, and compared the overall GPA and retention of students who completed a pre-college orientation to the overall college (Sandoval-Lucero et al., 2017). The authors conducted a one-way ANOVA to measure the overall effect of the orientation and paired sample *t*-tests for each individual topic in the orientation (Sandoval-Lucero et al., 2017). At the time of the current study, there had been no published information about the reliability and validity testing of the NSOA.

**Retrospective pretests.** This intervention's retrospective pretests used a Likert-type scale with responses ranging from one to five, with five being 'completely knowledgeable' and one being 'completely unknowledgeable' (see Appendix I). Sample items adapted from the NSOA included "knowledge of college terms (credit, semester, grade point average, etc.)" and "knowledge of associate degrees and certificate offerings". The retrospective pretests also included open-ended questions regarding student satisfaction with the program, based on questions included on the NSOA such as, "what was most helpful from this orientation", and "what was least helpful from this orientation?" (see Appendices I, J, & K) and were included for qualitative data collection and analysis.

**Focus group interviews.** The two focus group interviews addressed the constructs of quality of delivery, participant knowledge, and participant understanding of educational options. The focus groups were conducted as semi-structured interviews and referenced the open-ended retrospective pretest questions (see Appendix L). The focus group interviews also utilized questions from an interview protocol meant to examine how students defined success in college and the strategies they used to achieve success (Yazedjian, Toews, Sevin, & Purswell, 2008). In the Yazedjian et al. qualitative study of students' definitions and strategies for student success, the authors conducted 22 focus group interviews while studying the effects of academic support systems in college (Yazedjian et al., 2008). Similar to this intervention, the authors did not want to impose their own definition of student success upon participants, and as such sought to explore how students construct their own narratives of success and the behaviors that contribute to and detract from success in college. The focus groups interviews served as part of a larger study examining the success of first-year college students at a four-year university in Texas (Yazedjian et al., 2008). In an effort to ensure trustworthiness, the authors employed Lincoln and Guba's (1985) four criteria for trustworthiness: credibility, transferability, dependability, and confirmability. While the interview protocol utilized by Yazedjian et al. (2008) consisted of six questions, the researcher for the current study included only three questions that seemed relevant to this intervention: "Describe what it means to be a successful college student"; "What does it take to be successful here?"; and "How do you feel about your academics currently?" (p. 144). The final interview protocol for this intervention study comprised 11 questions and included items such as, "Did you feel the material covered in these videos was relevant to you as a community college student? If so, why? If not, why not?"; "Which video topics were most

relevant to you as a student?"; and "Did you access any services at the college as a result of watching these videos?" (see Appendix L).

## Procedure

This final section details the intervention design, data collection, data coding, and analysis using a mixed methods convergent design (Creswell & Plano-Clark, 2018). While it is discussed later in the limitations section of chapter five, instructional restrictions during the COVID-19 pandemic substantially impacted the design of this intervention. Based on the theoretical frameworks, this intervention could have been strengthened through more hands-on practice and modeling, communities of practice, and the opportunity for students to access support services in-person and on-campus as opposed to remotely. However, given that the researcher knew the instructional restrictions and parameters put forth by OTCC and its local county, the intervention was designed and implemented as described.

### Intervention

The video program was conducted from September to December 2020 and comprised three video presentations and three retrospective pretests during September, October, and November, and two focus group interviews at the end of the fall 2020 semester after all videos had been presented. Participants rated their level of knowledge related to student success, program completion, and transfer requirements prior to and after viewing the videos and discussed ways in which this program contributed to their personal goal development. Due to the COVID-19 pandemic and the requirement at OTCC for all courses to be taught online during the fall 2020 semester, videos were designed to be watched asynchronously and without any introduction from the researcher. At the start of the semester, the researcher sent an announcement to a colleague's two online classes where the video modules were piloted. The

announcement, shared with students via email and Canvas, introduced the researcher and the purpose of the study and invited students to voluntarily participate in the study. In the announcement, the researcher provided an overview of what the video module topics would cover and included information regarding the focus group interviews that would take place at the end of the semester. The announcement also included the informed consent form that participants could electronically sign and return to their instructor, who then forwarded the forms to the researcher (see Appendices M & N). Canvas is OTCC's learning management system and all online courses are taught through the platform. Therefore, students in the two pilot courses were accustomed to receiving messages and announcements from their instructor via Canvas. Videos were published within the Canvas course's weekly modules in September, then October, and finally in November with the culminating focus groups taking place in December. The videos and subsequent retrospective pretests were not part of a class assignment and had no bearing on students' grades, but were located in the same part of the Canvas course as weekly required lectures and assignments in an effort to increase visibility and participation. Students had access to their instructor, the researcher's colleague, via Canvas, Zoom, and email throughout the semester for any follow-up questions that surfaced as a result of the video presentations. Because the instructor is also an academic counselor at OTCC, the researcher hypothesized that some participants may have follow-up questions after watching the videos.

**Video implementation.** The first video on the college's support services was made available to students on Canvas at the start of the 5th week of the semester; the second video on educational options and program requirements was made available during the 9th week of the semester; and the third video on student success was made available during the 13th week of the semester. The researcher and instructor identified these weeks as relatively less time consuming

compared to other weeks in the course and ensured no assignments were due during those weeks in an effort to make watching the videos and completing the retrospective pretests manageable and low stress for students. The Canvas pages that contained the videos and retrospective pretest links were listed as the first item within that week's course module, but students were not required to watch the video or complete the survey before accessing the other course content of that week's module. On the same webpage beneath each of the embedded videos was the link to the corresponding Qualtrics retrospective pretest. Students were encouraged to watch each video and complete the survey by the end of the week that it was posted, but they were also informed that all three videos and retrospective pretests would be available for the remainder of the semester. The instructor reported no issues with including the videos and surveys in the Canvas course and no students reached out to them or the researcher with questions, concerns, or feedback. Table 7 offers a timeline of the intervention and includes the video topics and data collection for each session.

Table 7

*Video Module Intervention Timeline*

| Session & Date | Topic | Data Collection |
|---|---|---|
| Video 1:<br>September 14, 2020 | Student Support Services | Retrospective pretest |
| Video 2:<br>October 12, 2020 | Certificate & Degree requirements | Retrospective pretest |
| Video 3:<br>November 9, 2020 | Student success | Retrospective pretest |
| Focus Group:<br>December 7 & 9, 2020 | n/a | Focus group interviews |

As depicted in Table 7, video content covered available support services, certificate and degree requirements, and student success. Each video included visuals from the college's website and appropriate demonstrations, such as how to view degree audits and general education patterns, where to view program requirements, and how to access support services. The videos contained voiceover narration from the researcher, with options for closed captioning, and demonstrated how to navigate the college's online resources as well as visual presentations created for the intervention. Each video was between 15 and 20 minutes long. The videos also included relevant information and links to current events such as student health services workshops and transfer application review workshops. The videos incorporated the college's website and student portal whenever possible as a way to model these resources for participants and allow for legitimate peripheral participation (Lave & Wenger, 1991).

**Data Collection**

This section includes how retrospective pretest and interview data were collected. All students were provided with a written informed consent form at the beginning of the semester, which included consent to both the retrospective pretests and the focus group interview recording (see Appendix N). Participants were able to electronically sign the informed consent form and return to their instructor, who then forwarded the signed documents to the researcher.

**Retrospective pretests.** During the intervention study, participants used their college-assigned student identification number (SID) in order to pair their retrospective pretest data. Each survey utilized a side-by-side format of a retrospective pretest to allow participants to objectively assess their knowledge and the effectiveness of the intervention, as well as for the convenience of only using one measure per data collection (Hill, 2020). SIDs were also used to identify participants during the focus group interview to further triangulate the data. Participants'

names and SIDs were kept in a disaggregated database separate from other study materials to ensure participant anonymity. The open-ended questions were included as part of the retrospective pretests to gather qualitative data to allow for immediate feedback from participants. These questions also served as the opening questions of the focus group interviews (see Appendix L). Three retrospective pretests were administered using Qualtrics, an online survey platform. Participants were given until the end of the semester to complete all three retrospective pretests as the videos remained on the Canvas course page throughout the fall semester once they were published (see Table 7). The retrospective pretest data were uploaded to spreadsheet software from Qualtrics and included participant demographics such as education goal and intended major, Likert-type scale ratings, and the open-ended responses about the quality and helpfulness of the videos.

**Focus group.** During the first week of December, the instructor emailed the participants and explained that if they had already completed all three retrospective pretests or were willing to do so before December 7th, they were invited to join in one of the two focus groups. Students were provided with several opportunities via Canvas to sign up for either focus group through a Google spreadsheet. Students were required to confirm on the spreadsheet that they had watched all three video modules and completed all three retrospective pretests before signing up for a focus group. There was also an option on the spreadsheet for students to indicate that they wanted to participate in a focus group but neither day or time offered aligned with their schedule. However, no students completed that section. The Zoom information for attending the focus group was provided on the spreadsheet and the researcher sent individual emails and Canvas messages to each participant approximately 24 hours before the interview as a reminder and included the Zoom information. Focus group participants were encouraged to review the three

video modules prior to the interview so that they were familiar with the content of each video. The two focus group interviews occurred in December 2020 and took approximately one hour each (see Appendix M). The interviews were video and audio recorded via Zoom, which also produced complete transcripts for both interviews.

**Data Analysis**

The procedures for conducting a convergent design study can be thought of as a four-step process (Creswell & Plano-Clark, 2018). First, the researcher collected both the quantitative and qualitative data. The quantitative data were collected through retrospective pretests given to the participants after each video module while the qualitative data were collected through open-ended retrospective pretest questions and via the focus group interviews at the end of the semester after all videos had been presented.

Next, the researcher analyzed both sets of data separately. The retrospective pretest data were cleaned and uploaded to the statistical data analysis program Statistical Package for Social Sciences (SPSS). Matched pairs *t*-tests were conducted to determine if any changes in student knowledge and understanding occurred from pre- to post-video (Plichta & Garzon, 2009). The researcher also analyzed descriptive statistics with regard to the number of participants (see Table 9) and the number of educational goals participants reported (see Table 12). The open-ended retrospective pretest questions regarding the helpfulness of the video content were included as part of the Qualtrics survey in an effort to answer the process evaluation-related research questions. Focus group data were audio and video recorded and transcribed using Zoom recording features. Emergent and a priori coding were utilized because of the ability to use participants' own language as codes and for the opportunity to prioritize the participant's voice (Miles, Huberman, & Saldaña, 2020) while also connecting findings to the research literature.

Within step two of the convergent design analysis, the researcher followed Braun and Clarke's (2006) six step recursive process of thematic analysis. First, the researcher searched across the entire data set comprised of retrospective pretest responses and focus group interview data. The analysis involved moving back and forth between the entire qualitative data set including retrospective pretest data and focus group data, the coded extracts, and the researcher's analysis (Braun & Clarke, 2006). The researcher then followed the multi-step process of thematic analysis: they familiarized themselves with the data, generated initial codes, searched for themes, reviewed the themes, defined and named the themes, and finally produced the report (Braun & Clarke, 2006; see Table 8). The researcher also held to the importance of analyzing all data rather than only excerpts that seemed relevant and was careful to not use interview and retrospective pretest questions as themes (Braun & Clarke, 2006). While initially familiarizing themselves with the data, the researcher engaged in "repeated reading" (Braun & Clarke, 2006, p. 87) to search for meanings and patterns. The researcher read through both interview transcripts and all open-ended retrospective pretest responses before beginning the coding process to be familiar with all aspects of the data. After the repeated reading, the research began to mark ideas for initial coding. Initial codes included data extracts such as "where to find everything", "helped me choose my path", and "did not know about this when first enrolled".

After generating that initial list of ideas about the data, the researcher moved on to step two of Braun and Clarke's (2006) process and took a data-driven approach to manually generating the first round of codes. These codes were data-driven, as opposed to theory-driven, in that the codes depended on the data rather than with specific questions in mind (Braun & Clarke, 2006). While coding, the researcher highlighted segments of the data and wrote notes on the retrospective pretest response and interview transcripts. From there, the researcher grouped

together all data extracts within each code. Once all data had been initially coded and grouped, the researcher began to sort the codes into potential themes through the creation of an initial thematic map (see Appendix O). During this phase, the researcher considered the relationship between codes and between themes. This phase concluded with candidate themes and subthemes as well as all coded extracts. Then, the researcher reviewed and refined the candidate themes. The researcher again reviewed the codes and ensured that each code was paired with the most representative theme. Themes were also reviewed to ensure they formed a coherent pattern (Braun & Clarke, 2006). Finally, the researcher defined and named the themes based on the research literature. In terms of defining, the researcher identified the "essence of what each theme is about" (Braun & Clarke, 2006, p. 92). The researcher worked to ensure that themes were not overly complex and represented what was important about its codes rather than simply paraphrasing the codes (see Table 8).

Then, in step three of the data analysis, the researcher merged the two sets of findings, to form the discussion of the research study in chapter five (Creswell & Plano-Clark, 2018). Once data were merged, the researcher determined to what extent the two data sets converged or diverged from one another and used the combined results to present a deeper understanding in response to the study's research questions and overall purpose (Creswell & Plano-Clark, 2018; see Appendix G). To mitigate any paradigm dominance, a parallel-databases variant of a convergent design was utilized and the quantitative and qualitative data were brought together after each had been independently analyzed.

## Conclusion

The objective of this intervention was to create a single platform for students at OTCC to access a wide array of information related to student success, program requirements and

completion, and available services at the college. Through informational videos that modeled how to access and utilize tools such as degree audits, making a counseling appointment, and applying for certificates and degrees, the researcher measured through retrospective pretests and focus group interviews the constructs of adherence, context, quality of delivery, participant level of knowledge, participant understanding of educational options, and participant goal identification to address the five research questions guiding this study (see Appendix G).

## Chapter 5: Findings and Discussion

A total of 53 community college students watched and completed a retrospective pretest for at least one video, while 22 students watched and completed all three videos and retrospective pretests. Within the participants there was a range of 27 majors and eight educational goals (transfer, earn an AA/AS, earn a certificate, improve basic skills, undecided, prepare for the GED, job training, other). The details of the process of implementation are described in chapter four. Finally, by following the recursive process of thematic analysis outlined by Braun and Clarke (2006), the researcher identified several themes from the open-ended retrospective pretest questions and the focus group interviews (see Table 8).

### Findings

Lave and Wenger (1991) contended that from a situated learning perspective, learning must occur within an authentic context in which the knowledge is applied. This intervention utilized the authentic context of degree-applicable and transfer-level courses at OTCC. Due to the college's restrictions during the COVID-19 pandemic and the requirement that all courses be taught fully online and ideally asynchronously, this intervention had fewer opportunities for the legitimate peripheral participation and communities of practice components of situated learning theory. However, focusing on the authentic context within which this intervention was implemented allowed students to directly apply what they learned from the video modules and allowed students to practice concepts within the academic culture of the college. Finally, in considering Miles' (1965) organizational health framework, the researcher gave particular attention to goal focus, communication adequacy, and innovativeness in both the design and the evaluation of the intervention.

Table 8

*Codes & Themes*

| Code | Theme |
|---|---|
| Free resources | Awareness of Support Services |
| Did not know about when first enrolled | |
| Used tutoring services | |
| Can reach out and know it is there | |
| Did not know was available online | |
| Phone numbers/contact points | |
| Was unaware of resources | |
| Screensharing | Modeling |
| Showed where exactly to find things | |
| Wish had been shown at start of college | |
| Walk through navigation | |
| Never bothered to look at before | |
| Website is hard to navigate | |
| More accessible | |
| Take things more seriously | Student Success |
| Motivation | |
| First generation college student | |
| Single parent student | |
| No time to waste | |
| Structured approach | |
| Mindset of learning | |
| Success is a process | |
| Everyone has their own path | |
| Where to find everything | Where to Find Program Information |
| Course numbers | |
| Breakdown of programs | |
| Understanding of program | |
| Confident with chosen path | |
| Did not know needed GE | |
| Helped me choose my classes | |
| Helped me choose my path | |
| Did not know about certificates | |

**Implementation Fidelity (RQ1)**

The first research question was designed to determine the fidelity of implementation as well as the design of the intervention. Intervention program plans, such as the minimum number of participants and planned video components were reviewed to determine the implementation fidelity. The results indicated that the program was implemented as designed to the fullest extent possible in terms of the dates the videos were made available and including the retrospective pretest with each video. The intervention had a maximum number of 70 potential participants given that each class had an enrollment limit of 35 students. While the minimum number of participants goal ($n$ = 35) was met for the first and second videos, only 22 participants completed all three retrospective pretests and a total of nine students participated in one of the two focus group interviews. Additionally, participation decreased with each new video (see Table 9) prompting the researcher to explore feedback from the initial retrospective pretest and consider ways to sustain interest and participation.

Table 9

*Descriptive Statistics*

| | *N* |
|---|---|
| Retrospective Pretest #1 | 43 |
| Retrospective Pretest #2 | 41 |
| Retrospective Pretest #3 | 34 |
| Completed at least one retrospective pretest | 53 |
| Completed all three retrospective pretests | 22 |
| Focus group participants | 9 |

The focus group interviews were also implemented as designed by offering two interview options on different days and at different times at the end of the semester, but prior to finals week.

**Contextual Relevance (RQ2)**

The second research question focused on the context of the college and how well the implementation of the intervention considered and aligned with other departments and services at OTCC. Institutional document analysis, retrospective pretest data, and the focus group data were analyzed to determine relevance and consideration of the context. Specifically, the researcher examined other department's webpages and incorporated relevant and timely information within the video modules. For example, in the video regarding transferring, the transfer center's webpage and upcoming workshops for students were modeled within the video. When discussing available support services, the video showcased the student health services' webpage and showed upcoming workshops, available services, and how to schedule appointments. Moving forward, the researcher will consider including the links to each departments' direct webpage so that students are always able to view the most up-to-date information. When asked what was most helpful about the first video, open-ended retrospective pretest responses included, "showing us where to find the support needed for separate topics", "phone numbers for each individual service", "the link for online student services", and "where to find all this information", thereby confirming that embedding direct contact information may in fact be more helpful than trying to include all potentially relevant information within the context of the college.

Additionally, context specific information was discussed such as specific programs and practices at OTCC. For example, in the second video module about academic programs and transferring, the researcher discussed how courses at OTCC articulate with other schools, which programs are transferrable and which are not, and the various general education options at OTCC. When asked what was most helpful in the second video, some open-ended retrospective pretest responses included, "the detailed breakdown of which type of courses are transferable to

different universities", "…learning what the course numbers meant was also very helpful", and "most helpful was that you were on the website showing what we should look at and what it looks like". These findings confirm that context-specific information is important for students' understanding of program completion, as well as modeling the college's numerous online platforms and webpages.

The content of the third video module explained how student success is determined within the context of the college. The researcher acknowledged that students enroll in community college for a variety of reasons (Nitecki, 2011). Rather than presenting certificate completion, degree completion, and/or transferring as the only forms of success, the researcher highlighted in the videos the various ways to be successful in college. The researcher also presented the factors that contribute to success such as clear goals, accessing support services, physical and mental health, and personal support systems. When asked what was most helpful about the third video on student success, open-ended retrospective pretest responses included, "learning how to find what classes I need to take and also learning how college measures success", "finding resources to be the most successful student", and "the holistic view that college is not just about your classes".

During the focus group interviews, participants also commented on the relevance of both the content and the design of the intervention. When asked if they felt like the content of the videos were helpful, one participant replied:

> I actually think that it was very relevant to us because, to be able to go through all that stuff, we don't, you don't really give a crash course on how to navigate through it so for somebody to take the time to be able to go ahead walk us through everything. … So, it was very helpful. (Student A, Focus group 12-7-20)

In examining the quantitative retrospective pretest data for contextual relevance, several retrospective pretest questions were closely related to the context of OTCC. For example, participants were asked to rate their knowledge on the multiple forms of support services and which to access based on their needs, their knowledge of OTCC's general education (GE) requirements, and knowledge of how to find the required classes for their program of study. A paired sample *t*-test revealed a significant difference between pre- and post-intervention knowledge (see Table 10).

Table 10

*Contextual Knowledge*

| | Pre-video | *SD* | Post-video | *SD* | *t* |
|---|---|---|---|---|---|
| Knowledge of multiple forms of support services available in-person and online at the college[a] | 3.02 | 0.89 | 4.60 | 0.49 | -12.60* |
| Knowledge of how to access various support services[a] | 2.58 | 1.05 | 4.47 | 0.67 | -12.29* |
| Knowledge of which services to seek out for academic support as opposed to, for example, mental health supports or financial aid[a] | 2.86 | 0.94 | 4.60 | 0.58 | -12.68* |
| Knowledge of general education requirements[b] | 3.42 | 1.18 | 4.58 | 0.63 | -8.03* |
| Knowledge of how to find required classes for your degree or certificate[c] | 3.35 | 1.27 | 4.57 | 0.60 | -5.91* |

[a]$n = 43$; [b]$n = 41$; [c]$n = 34$
* $p < .01$

For the first retrospective pretest regarding support services and how to access them, no participants scored lower after the video, but three participants rated their knowledge as the same before and after the video. When asked what was most helpful about the first video, one of the three participants whose score stayed consistent pre- and post-video, reported in the open-ended portion of the retrospective pretest, "just a good refresher of all of the available support options" and when asked what was least helpful about the video, the same respondent reported, "nothing really, the video was easy to follow".

Similarly, no participants reported decreased knowledge of GE requirements after the second video, but ten participants reported the same level of pre/post knowledge. When asked what was most helpful about the video, some of the participants whose knowledge level stayed the same reported in the open-ended portion of the retrospective pretest that the "transfer options because it is relevant to my educational goal", "showing websites that have information", and "detail on transfer requirements", thereby indicating that topics within the video other than GE requirements were most helpful for some participants. Six participants increased their ratings from a *1 Completely Unknowledgeable* to a *5 Completely Knowledgeable* after watching the second video. Of those, three participants reported on the open-ended portion of the retrospective pretest that the most helpful aspects of the video were, "learning how to find what classes I need to take", "how to find classes for my degree", and "showing the location on the website to see what the requirements are for certificates and majors". These findings in particular are important given the literature that contends many community college students do not know what is required of them and increase their time to completion by enrolling in classes that do not contribute to their program of study (Shapiro et al., 2016). One theme that emerged through the recursive coding process related to contextual relevance is participant awareness of support services.

**Awareness of support services.** While discussing how relevant the video content was, the focus group participants shared that they became more aware of support services as a result of the video. Not only did the video on support services inform students of available services, but also motivated them to utilize the services:

> I really, really appreciated the video that you did about the [*OTCC*] resources such as the counselors, the phone numbers, [*and*] the contact points. I'm actually utilizing some of those services and they're fantastic. So, before I watched your video I had no idea what was available to us as students, so thank you for that. (Student B, Focus group 12-7-20)

In addition to the focus group respondents, retrospective pretest comments confirmed that providing information on services was one of the most helpful aspects of the video. For example, one student's open-ended retrospective pretest comment after the first video included: "informing me of all the various services that [*OTCC*] offers for free to its students and how to get there". Providing the contact information for each service may lead to increased service utilization as opposed to just educating students on the existence of services. For example, when asked what was most helpful about the first video, one retrospective pretest respondent wrote: "…the phone numbers that were shown. I had no idea there was a phone number I could call!" This feedback confirms that OTCC may be able to better serve students via support services if the college is more explicit in how students can access these services.

**Participant Experience (RQ3)**

The third research question focused on student experiences engaging with the video module intervention and specifically the construct of quality of delivery, which was measured through the retrospective pretests and the focus group interviews. In analyzing the qualitative data, there was a mix of what students found helpful and unhelpful. For example, while many

participants commented on the retrospective pretest that including direct phone numbers to various offices at the college was the most helpful aspect of the first video, other students expressed the need for other information. When asked what was least helpful in the video about college support services, one student wrote on the retrospective pretest, “the video didn’t go too in depth about where to find these services on the website”.

While evaluating the retrospective pretest data about the video on program and transfer requirements, some participants reported that the length, wide range of information, and including both certificate and degree options in the same video was unhelpful. Alternatively, students who had not yet decided on their long-term goals found the multiple topics helpful: “what was most helpful was getting an understanding of the different options already within [*OTCC*] and beyond here” (Student C, Focus Group 12-7-20). Additionally, some participants did not find the intervention program relevant to their own circumstances. For example, when asked during the focus group if the information covered in the videos was relevant for community college students, one student responded:

> I wouldn’t say they were super, like, relevant to me personally in terms of my own pathway…but I would say what was interesting was realizing just how many options there are as a community college student. Because I feel like there's this sort of mindset of, like, yeah, you're just paying for classes, and you don't realize the level of support that's offered at this level as well. (Student E, Focus group 12-9-20)

Focus group participants also identified the videos as a helpful resource when other support services were not available. For example, Student B explained in the focus group interview that after working hours and when academic counselors were not available, they were able to watch

the video on GE requirements and answer some of their own questions. Another participant described the videos as a motivational tool:

> I think having them allows you to, sort of, I don't know in a weird way like watching the videos and just knowing all these things exist, sort of made me want to take things more seriously. I guess it's like, just that structure adds to the sort of foundation and in a weird way motivation. (Student E, Focus group 12-9-20)

Another focus group participant reported that the video format was helpful as opposed to another webpage or flyer:

> The video format is the best. I think if I was to have to read it or something, I would have just skimmed it. Which, everything's there on the website right it's like, same kind of principle you just, you don't really look at it. But the video made it more engaging to retain the information itself. (Student F, Focus group 12-9-20)

Following that statement, another focus group participant, Student E, added, "Yeah, I agree with [*them*]. I think the video just really gets your attention and you're able to also see everything. So, you're listening and you can see". These remarks reinforced the theme of modeling and the need to present the college's website and online platforms in order to situate students' knowledge within the authentic context of the college (Lave & Wenger, 1991).

**Modeling.** Specifically, the videos modeled several processes such as accessing the schedule of classes, locating degree and certificate requirements on the website, and navigating the online student portal. The data revealed that the use of modeling as a tool to present relevant resources proved particularly helpful to the student participants. In terms of the quality of the videos themselves, the focus group participants provided valuable feedback with regard to the format and digital tools used. For example, during the focus group a student shared:

> And the thing I wanted to add, just kind of like in general, how you like with the screenshare your screen or whatever, while trying to show us the portal, like, where exactly to find it. I thought that was super helpful because every time I've gone to a counselor, they'll just say 'oh, just go here in your portal' and it's really confusing sometimes and just trying to navigate the website can be super hard. … So, I think that is really helpful. (Student F, Focus group 12-9-20)

Another participant also shared that navigating their student portal and the college's website can be challenging and that it took this video program to help them effectively navigate the college's platforms:

> I think the most helpful thing is just putting it out in a very clear, concise way – just the different options that are available. So, I think it was helpful that it broke it all down in a very easy to digest way. I think probably the only criticism would be, it's not necessarily against the video, it's like, that's what it even took to even find out. You know, like, it's almost kind of buried in so many other paths you could take, especially on the website. (Student E, Focus group 12-9-20)

Access to the video modules earlier in their OTCC career was shared by another participant:

> I wish I would have seen it at the beginning, because like [*participant*] said, like, it's my first year and I had no idea where to even like find my homework or, you know, go to like get my admission number or anything. If I got that at the beginning of the year it would have saved me a lot of headache. (Student G, Focus group 12-9-20)

Finally, when discussing the modeling components within the videos, participants identified that there are few other resources at the college that can teach them how to navigate the college's online platforms. When discussing the relevance of the video content, one participant responded:

> I actually think that it was very relevant to what we're doing because, to be able to go through all that stuff, we don't, you don't really give a crash course on how to navigate through it. So, for somebody to take the time to be able to go ahead walk us through everything. Because I mean, even you can find videos for that, but you actually had to navigate through it, even find it on your portal and stuff. And, and then like in May this year they changed it [*student portal*] so now you have the old thing and then the new one. So, if you're someone that's new, you had no idea how to how to navigate it. And then you had to kind of guess where you're going, so like finding Canvas, I didn't know where that was and all that kind of stuff. So, it was very helpful. (Student A, Focus group 12-7-20)

Participant feedback indicates there are opportunities for further support within OTCC to teach students how to navigate the platforms and resources that are relevant to them. For example, not knowing how to locate and login into a Canvas account can directly impact student completion by not being able to participate in and complete their classes. While some participants reported that the content was a review of information they already knew, no participants in this sample specifically criticized the use of modeling within the videos. These findings from this sample would indicate there may be a need to explicitly show students how to use the tools and resources that are available to them.

**Understanding of Program Completion (RQ4)**

The fourth research question asked in what ways the video intervention affected students' understanding of program completion. Based on the chancellor's office definition of program completion, the researcher examined participant understanding of certificate and degree completion as well as transferring (California Community College's Chancellor's Office, 2019).

To determine program completion understanding, several retrospective pretest questions were relevant such as knowledge of certificate and degree options, knowledge of transfer requirements, knowledge of the many factors that contribute to student success, and knowledge of how the college defines student success. Paired sample *t*-tests revealed a statistically significant increase from pre- to post-intervention knowledge for all relevant questions (see Table 11).

Table 11

*Knowledge of Program Completion*

| | Pre-video | *SD* | Post-video | *SD* | *t* |
|---|---|---|---|---|---|
| Knowledge of certificate and associate degree options[a] | 3.00 | 1.20 | 4.56 | 0.63 | -10.39* |
| Knowledge of transfer requirements[a] | 2.65 | 1.23 | 4.40 | 0.69 | -9.55* |
| Knowledge of the many factors that contribute to student success[b] | 3.41 | 1.27 | 4.68 | 0.63 | -8.29* |
| Knowledge of how the college defines program success[b] | 2.78 | 1.23 | 4.51 | 0.56 | -8.34* |

[a]$n = 41$; [b]$n = 34$
* $p < .01$

No participants reported decreased knowledge levels after viewing the videos, but four participants reported the same level of pre/post knowledge after the second video regarding certificate and degree options. Another participant rated themselves the highest (5) in all categories pre- and post-video, and when asked what was most helpful about the video they responded on the retrospective pretest, “all the information” and that “nothing” was unhelpful. Alternatively, a student who rated their pre-video knowledge as *1 Completely Unknowledgeable*

and their post-video score as a *5 Completely Knowledgeable* reported on their retrospective pretest:

> Great video. Would be very beneficial at the start of a semester to help students understand how to find out about all the programs offered. It helped me figure out what classes I should be taking and also to stop being so hard on myself since this has been such a rough year.

Another student whose self-rating increased from a one to a five after watching the third video, responded on the retrospective pretest that "learning how college measures success" was one of the most helpful aspects of the video. While defining student success was not intended to make some educational outcomes less meaningful than others, the researcher is interested in further exploring if how the college defines success would act as a motivator for students to achieve one of the metrics of success.

**Student success.** One theme that surfaced through the recursive process of thematic analysis was that of student success. As identified through the needs assessment data (see chapter two), students at OTCC did not define success solely based on program completion and/or transfer. While student success was clearly defined in the third video based on the college's definition, many participants still thought about factors other than program completion. For example, one focus group participant understood the requirements necessary for completion, but also learned that they did not necessarily need to earn straight A's:

> I really liked how you defined student success. It kind of helped me because I was so, I guess for a better term, 'anal' about like, making sure I'm getting really good grades and everything's in order. But it was stressing me out so bad, you know, so I kind of took a

> step back and I was like as long as I can complete my classes and stuff like that I'm doing okay. (Student B, Focus group 12-7-20)

Participants also reflected on external factors out of their control and how those may affect their academic progress. For example, at the time of the focus group interviews, students had been completing classes fully remotely due to the COVID-19 pandemic, and many students were affected by regional wildfires and resultant power outages earlier in the semester. When discussing what it takes to be a successful community college student during the focus group, one participant responded:

> So, this is my first year back in school in about 15 years. And I set some really high expectations for myself. And so, I'm finding that difficulty trying to balance the self-care with the acceptance of you're doing your best. And so, learning how to ask for help is really, really important as a student. And I think communication with teachers has been really beneficial especially through the pandemic, the fires, and the power outages. Like, we've had a really crazy semester. So, I think that just learning how to accept what we're doing in the moment is our best, and just learning how to be kind to ourselves, and overall as a student, I think it's going very, very well. (Student H, Focus group 12-9-20)

Other participants clearly defined success in ways that aligned with the chancellor's office definition and spoke to their personal circumstances that motivated them to complete their program of study. When asked how they feel about their success as a student during the focus group, one participant replied:

> I mean for me I feel like I'm pretty successful being that I'm a single mom of four kids at home and I'm making it, you know? I feel like it really does take determination; you've really got to know what you want to do and just go for it. You know, for me personally I

> can't be second guessing myself, I've got to constantly keep thinking positive and looking forward. And that's what keeps me going to push toward my goals, because I definitely want to be a first generation college graduate. (Student A, Focus group 12-7-20)

Immediately after, a similar response:

> Yeah, I'll second her with that because I'm in the same situation: single mom with four kids. You just, you're there because you have a goal and there's no time to waste. You just don't have it [*time*] so you're really serious about your classes and getting your work done because you know you're not messing around. This is your time. (Student B, Focus group 12-7-20)

Closely tied to the conversation about student success, several participants then began discussing their motivation for pursuing and continuing their education. Several participants discussed returning to school after a hiatus or the need to support their families as motivation for completing their program of study at OTCC. When trying to make connections between motivation and the video intervention a student noted:

> … Not to say like, 'oh, that's why I studied better and got good grades', but it does kind of tie into the narrative of like just taking those things a little bit more seriously and putting a little bit more time into them. (Student E, Focus group 12-9-20)

Another theme identified by the researcher that is closely related to student success is students' ability to find program information.

**Where to find program information.** As identified in the needs assessment, students at OTCC were not aware of the requirements to complete a degree or certificate or those necessary to transfer to a four-year university. As such, a primary objective of this intervention was to increase student knowledge of program requirements and how to complete a degree or certificate

and/or transfer. While analyzing the qualitative data, one relevant theme that emerged was student understanding of where to find program information. When asked which aspects covered in the videos were most helpful, a student who is preparing to transfer in one more semester, responded:

> I feel like the educational one when you were talking about how and what steps you need to take. At first, I didn't really know that they had all those certificate programs. For me personally, I decided to do the associate degree, but I didn't really even know about the certificates because I probably would have double majored, or did a certificate program, and then of course a transfer. So, it was very helpful just to know that they do offer so many certificate programs that you can just get a certificate, and you're done like within a couple months. I was amazed. (Student A, Focus group 12-7-20)

Based on this response, it became apparent that regardless of how long they have been enrolled at OTCC, students may not be aware of their educational options. Another respondent who had even accessed OTCC support services, such as academic counseling, still did not fully understand why they took the courses they did:

> Where to find everything [*was most helpful*] because when I signed up for school I had no idea. I met with counselors and they were like, 'just take this class and this class' and I'm like 'yeah but why', you know? Like, I have no clue why I'm supposed to do this or what I have to take and stuff like that so I really liked that video. (Student F, Focus group 12-9-20)

While this intervention intended to support not supplant existing services, there is evidence from this sample of students that it offered necessary information that helped students further understand their education plan and how it relates to their goals.

**Student's Educational Goals (RQ5)**

The fifth research question asked if the video intervention had any impact on students' educational goals. Between all three retrospective pretests, all eight educational goals were selected, however, the frequency of each goal fluctuated from one retrospective pretest to the other (see Table 12). When students apply to OTCC, they are given the option to choose from the educational goals listed on each of the retrospective pretests (see Table 8) and can update or change those goals whenever they meet with an academic counselor. For example, while applying to enroll at OTCC, a new student can select that they are "not sure/undecided" on their goal, and can later change that to "transfer to a four-year university with or without an AA/AS" with a counselor. The goal identifications in this study indicate some potential influence from the video content. For example, the second video regarding associate degrees and transfer requirements exhibited the largest number of participants who identified their goal as transferring to a four-year university. Additionally, the number of students who were undecided on their goal decreased from the first video to the second video, but then increased again after the third video. While the third video and retrospective pretest exhibited participant attrition with only 34 respondents, the range of educational goals decreased compared to the first two retrospective pretests and participants selected only four of the eight goal options. While discussed later in this chapter, participant maturation and selection-history serve as threats to validity when determining whether these findings are a result of the video intervention or other factors (Shadish et al., 2002).

Table 12

*Educational Goal*

| | *N* |
|---|---|
| Retrospective Pretest #1 | |
| Transfer to a four-year university with or without an AA/AS | 14 |
| Earn AA/AS | 16 |
| Earn a certificate | 3 |
| Improve basic skills | 1 |
| Job training | 0 |
| Prepare for the GED | 0 |
| Not sure/undecided | 6 |
| Other | 3 |
| Retrospective Pretest #2 | |
| Transfer to a four-year university with or without an AA/AS | 19 |
| Earn AA/AS | 13 |
| Earn a certificate | 2 |
| Improve basic skills | 1 |
| Job training | 1 |
| Prepare for the GED | 1 |
| Not sure/undecided | 3 |
| Other | 1 |
| Retrospective Pretest #3 | |
| Transfer to a four-year university with or without an AA/AS | 16 |
| Earn AA/AS | 10 |
| Earn a certificate | 3 |
| Improve basic skills | 0 |
| Job training | 0 |
| Prepare for the GED | 0 |
| Not sure/undecided | 5 |
| Other | 0 |

During the focus groups, when asked how confident they feel in their ability to define their educational goals, two respondents reported, “I’m very crystal clear on my own personal goals” (Student A, Focus group 12-7-20), and “I feel pretty confident. It’s very X, Y, Z, like I need to do this, this, and this” (Student F, Focus group 12-9-20). When then asked how confident they feel in their ability to achieve those goals, one student further confirmed:

> Yeah, most definitely. I feel like that it's there, like you guys have good resources, you know, and they just need to be posted a little bit more. I feel like they should put out more notifications about the resources. (Student A, Focus group, 12-7-20)

Other participants were less confident in their goals, though. For example, when asked how confident they felt in being able to identify their education goal, one participant shared:

> I can tell you that before I signed up for classes, I had no idea. I just had a general vicinity of Alcohol and Drug Counseling, but now that I've watched the videos and I have a better understanding of the program itself and what classes are within that requirement, I'm a little more confident to say okay well, this is the path I choose. And it's okay if I choose to go through something different, and I can see if those classes will apply [*to a different degree*]. (Student C, Focus group 12-7-20)

Overall, participants did not indicate that the video intervention influenced their specific program of study. However, some participants did express that the intervention program played a role in changing their goals. For example, at the end of the second focus group, one participant confided to the researcher:

> So, you know, I just wanted you to know that you kind of helped me want to further my education and stuff. Right now, I'm trying to see where are good schools, maybe, you know, to transfer to, if I desire. (Student H, Focus group 12-9-20)

Other participants also indicated that had they known about all of OTCC's programs, such as short-term certificates, they would have pursued those in addition to their transfer goal. Moving forward, it is important to examine the same research question with new and/or undecided students in an effort to measure the impact specifically on student goal identification.

## Conclusions & Discussion

As of 2019, 93% of students at OTCC had met with an academic counselor and created a unique and personalized education plan. Most of what was presented in the video module intervention program is also discussed when students meet individually with counselors, the exception being the discussion of how student success is defined by the college. As such, it was not surprising that several participants reported on the retrospective pretests and during the focus group interviews that while the information was helpful, much of it was review that they had already heard elsewhere. The findings of this study do indicate that participant knowledge significantly increased across all three domains: support services; certificate, degree, and transfer requirements; and student success. Participant responses also indicated that the video modules helped them better understand where to find program-related information, motivated them to utilize the college's support services, and helped them develop a better understanding of how the college defines student success and how that relates to their own personal and educational goals.

Moreover, qualitative data confirmed that the methods employed in the video modules such as voiceover narration, modeling of various online platforms, and providing direct contact information to referenced services was an effective and useful approach. During the focus group interviews, participants reported that these types of on-demand videos would be helpful if featured on OTCC's website and mobile app and they even suggested new topics for additional videos. Participants also suggested that many videos on a variety of topics for shorter lengths of time would be most helpful as opposed to one 30-minute video that covered several topics. Finally, the findings from this sample suggest that the intervention helped participants change their overall goals, feel confident in their chosen pathway, and supported them in confirming their program's specific requirements for completion.

The findings of this study are discussed based on participant experience in the program, student knowledge affects, and student educational goals. These findings are framed by the literature, specifically Miles' (1965) organizational health framework and Lave and Wenger's (1991) situated learning theory. Finally, this discussion concludes with limitations and implications for practice and future research.

**Organizational Health Framework**

Miles (1965) described a healthy organization as one that not only survives in its environment, but continuously develops and extends its survival and coping abilities. In the case of OTCC and other community colleges in states with performance funding models, institutions must continue to develop and employ new methods to meet performance metrics in order to survive as organizations. This intervention gave particular consideration to the organizational health dimensions of goal focus, communication adequacy, and innovativeness (Miles, 1965). With regard to goal focus, OTCC leadership has made it clear to its stakeholders that in order for the organization to remain healthy, the college must demonstrate increased rates of student completion. As such, this intervention focused on program completion requirements, accessing support services that help to remove barriers for students, and informing students of the various ways to achieve success in college.

Based on the needs assessment, OTCC needed to improve its communication with students regarding the topics covered in the video modules. With regard to communication adequacy, it was important to provide students with accurate and helpful information without them needing to exert undue efforts to obtain that information (Miles, 1965). Particularly regarding program completion, if it is to be a primary goal of OTCC, then students must have readily available information on how to complete their program of study. Additionally, the

researcher sought feedback and ideas from the study participants to determine if the intervention was relevant for community college students and the best ways to widely share these videos with other students.

Finally, this intervention served as an innovative tool meant to supplement and connect existing services and to provide students with a comprehensive understanding of program completion. OTCC does not currently have anything like on-demand informational videos available to students so the researcher proposed this program as a way to further differentiate the college's services while considering student interests and accessibility. In addition to considering OTCC's organizational health, the researcher considered situated learning theory to drive the design of the intervention itself.

**Situated Learning Theory**

As discussed in earlier chapters, situated learning theory is one of the frameworks that guided the design of this intervention. Lave and Wenger (1991) purported that learning must be situated in an authentic context and allow for learners to gain new knowledge through a participatory enculturation process. This legitimate peripheral participation is meant to take place within communities of practice so that learners can actively engage in the process of becoming part of a sociocultural context. Schools and colleges, such as OTCC, are in and of themselves social institutions with unique social contexts and practices. As explored in chapters one and two, students' levels of cultural capital often play a large role in their success in college due to their understanding of the culture of higher education and their ability to access information, resources, and services (Martin et al., 2014). Due to limitations imposed by OTCC because of the COVID-19 pandemic, this intervention provided asynchronous modeling in the authentic context and encouraged legitimate peripheral participation from students on their own rather than

doing so together in a community of practice. While participants watched the videos and completed the retrospective pretests individually, the focus group interviews exhibited social interactions and collaboration between participants that are characteristic of communities of practice (Lave & Wenger, 1991). Additionally, participants confirmed the strengths of modeling college services within the authentic context of the college and indicated that doing so increased their knowledge and motivation to utilize support services. Overall, there is evidence in the form of focus group and retrospective pretest comments that participants had positive and meaningful experiences, increased their understanding of program completion, and identified and/or confirmed their educational goals through their participation in the intervention program.

**Participant Experience**

Participants reported an overall positive experience participating in the program. Students described the relevance of the intervention as ranging from a helpful review of information that participants already knew about to providing critical information that immediately impacted student behaviors. Based on content as well as delivery methods, this intervention attempted to promote a college culture of student completion by sharing information regarding availability and locations of student services and through innovative ways of connecting with students (Schuetz, 2005). Similarly, the intervention continually emphasized graduation requirements and support services targeted toward completion, which have been shown to effectively make completion part of a school's purpose and design (Ancess & Ort Wichterle, 2001). By situating the program within the authentic context of OTCC, participants completed the intervention program with self-identified goals, interests, and behaviors that align with OTCC's organizational health needs.

While participants reported a better understanding of program completion and where to find information about requirements for their program of study, many participants also reported an appreciation for the program's promotion of self-care and understanding of the many factors that impact students throughout their college careers. This appreciation and feeling of being understood and supported is crucial given the direct and significant relationship between students' intent to finish college and their perception of institutional and social support (Thomas, 2014). Not only did this intervention help students further develop college know-how (Karp & Bork, 2012), but it promoted a college culture that emphasizes student success and completion.

**Increased Knowledge**

The quantitative data revealed statistically significant increases across all domains relating to student knowledge and understanding. While statistically significant increases were evident in students' knowledge of support services and how to access them and how OTCC and the state define student success, this study was primarily concerned with students' knowledge of program requirements. As discussed earlier in this chapter (see Tables 10 and 11), participants demonstrated significant gains in knowledge regarding transfer requirements, GE requirements, and where to find information relating to their specific program's completion requirements. Given the needs assessment findings that sampled students at OTCC generally did not understand program completion requirements, coupled with the literature on the importance of accurate and strategic advising (Young-Jones et al., 2013), these increases in student knowledge are particularly relevant when evaluating the long-term outcomes of this intervention and its impact on student completion (see Appendix F).

Importantly, student knowledge of program requirements is likely not enough to increase completion rates on its own. OTCC must continue to offer comprehensive counseling services to

regularly update student education plans, discuss academic progress, and make appropriate referrals as needed to services such as tutoring, health services, and financial aid (Bahr, 2008). Participants' increased knowledge of available support services and how to access them is an important finding in this regard and when combined with their increased understanding of program requirements, it can then amount to a comprehensive approach for improving completion rates at OTCC.

**Educational Goals**

The intervention's contribution to participants' educational goals had the most mixed results. During the focus group interviews, many participants admitted that the intervention had little influence on their specific educational goal, but at the very least helped them confirm and feel confident in their chosen path. Some of these same participants, however, reported that on a larger scale the intervention helped them feel more motivated to achieve their goals and to take their education seriously. Other participants, though, reported that over the course of the semester and with the help of the intervention videos, they were able to clarify their goal and confirm what was required of them to complete their program of study. Finally, some participants discussed how the overview of all their educational options made them want to expand their educational goal and continue their education to a level beyond what OTCC offers. This intervention was not tailored for individual academic programs, which aligns with the finding that it did not necessarily help students identify the subject area they are interested in. However, by explaining all of the educational options available to students and how each one meets a metric of student success, motivating students to pursue a path toward completion indicates that this intervention could ultimately increase OTCC's completion rates and overall organizational health (Miles, 1965).

The findings relating to goal development are particularly important to the long-term goals of this study (see Appendix F) given the research literature on goal identification and increased likelihood of program completion and/or transfer (Jenkins & Cho, 2013). Based on the research literature as well as the feedback from participants who had already identified their educational goals, this intervention may be particularly well-suited for students during their first semester at OTCC or even incoming students prior to their first semester. Finally, there are several limitations to this study due to a variety of factors that may have led to less robust findings and a less impactful intervention.

**Limitations**

This study has limitations based on participant recruitment, length and components of the study, logistical restrictions imposed by OTCC, and participant experiences due to the COVID-19 pandemic. First, students were recruited from two transfer-level counseling courses, one of which is associated with specific programs of study: Advocacy Counseling and Alcohol and Drug Counseling. Students from these two courses were recruited as a form of convenience sampling given that the researcher is faculty in the counseling department and had a colleague who was willing to pilot the video modules in their classes. As a result of this, the study sample had a more limited range in programs of study than is representative of OTCC as a whole. The other class, Introduction to Career Development, may have enrolled students that were intentionally searching for information covered in the intervention such as transfer requirements, educational options, and how to find program requirement information. Results could have been substantially different with a wider range of majors and student characteristics such as length of enrollment and educational goals. Due to these limitations of the study sample, these findings may not be generalizable to the larger OTCC student population and other community colleges.

Next, this study took place from September to December and comprised three videos and three retrospective pretests. Based on the research literature, there are several other topics that could have been included such as time management, self-efficacy (Young-Jones et al., 2013), how to prepare for life beyond college (Ancess & Ort Wichterle, 2001), and how to increase sense of belonging (Schuetz, 2005). To further employ components of situated learning theory and to gather more data on participant experiences and outcomes, this study could have created communities of practice for participants and included exercises such as reflective journaling, activity and participation with college resources, and interaction between participants for sharing ideas and establishing community culture. Based on participant attrition over one semester, however, the researcher hypothesizes that participation would have further decreased had there been a requirement to participate in a semester-long community of practice. The length of the video modules could also be one contributing factor to participant attrition and the researcher is interested in adapting the intervention to meet participant feedback regarding the amount and length of videos.

Additionally, while there was participant attrition from one retrospective pretest to the next (*n*s = 43, 41, 34, respectively), participant-identified goals were subject to other threats to validity. First, the data may be subject to participant maturation wherein the participants learned more about themselves, their interests, and different educational options throughout the semester thus explaining the variations in goals from one retrospective pretest to the next (Shadish, et al., 2002). Moreover, selection-history posed a threat to the validity (Shadish et al., 2002). For example, several participants reported on the retrospective pretests as well as during the focus group interviews that much of the content in the videos was a review of information that they had already received elsewhere. The researcher, however, was aware at the outset of the

intervention that these two courses enrolled students with a clear set of selection history and that some portions of the videos would not be as effective with this population. Moving forward, the researcher could consider making video modules that discuss the nuances between similar programs of study to help students better clarify their subject-matter interests. In the future, it may be helpful to identify new, incoming, or undecided participants to take part in this program to measure the goal identification outcomes. As such, participant maturation, the range in knowledge and experiences across participants, and other co-occurring processes that may have contributed to participant knowledge and self-development are important threats to consider when discussing the significance and validity of the findings.

Finally, the COVID-19 pandemic posed multiple limitations to the study in terms of logistics as well as participation. All courses at OTCC were taught online during the fall 2020 semester due to state and county restrictions. Consequently, OTCC requested its faculty to offer asynchronous lectures whenever possible to accommodate student schedules, issues with internet connectivity, sharing computer resources with other family members, and to promote increased equity and access. In compliance with the college's request, both courses in which this intervention was piloted were taught entirely asynchronously with pre-recorded lectures and no required face-to-face time. While this intervention was sufficient with its pre-recorded videos, it could have been much more in-depth had it included synchronous components throughout the semester. For example, if participants had watched the videos together with the faculty present, there could have been an opportunity for questions, reflection, and debriefing immediately after each video. This process also would have contributed to an increased sense of culture and characteristics of communities of practice (Lave & Wenger, 1991). Additionally, participants may have been more forthcoming both on the retrospective pretests and during the focus group

interviews had they known each other and felt more comfortable sharing their ideas and experiences.

Due to potential coercion, the researcher could not conduct the intervention with students enrolled in their own courses. As a result, the researcher did not have any opportunities to become part of the local landscape and develop a rapport with participants prior to the focus group interviews (Miles et al., 2020). Subsequently, there was potential for the "effects of the researcher on the case" (Miles et al., 2020, p. 291) that caused participants to change their role, persona, or views for the outside researcher. Moving forward, there are several implications for future practice and research that could mitigate some of these identified limitations.

**Implications for Practice**

Relevant literature demonstrates that community college students frequently do not understand the importance of completing a program of study (Bers & Schuetz, 2014), are unaware of the academic demands and requirements even once enrolled in community college (Goldrick-Rab, 2010), and possess relatively low self-development (Mercer, 2010), all of which then impact their likelihood of completing a certificate, degree, and/or transferring. By helping students increase their understanding of program requirements, access relevant support services, and clarify their educational goal all while allowing them to better understand and assimilate into the culture of higher education, community colleges can make strides toward increasing their completion rates.

It is important to note that not all participants in this study found the video module intervention helpful or relevant, despite the statistically significant positive findings across all three retrospective pretests. The retrospective pretest and focus group data suggest a need for more video topics so that all students' interests can be addressed. For example, students who

have no intention of transferring to a four-year university found the second video largely irrelevant beyond the discussion of associate degree requirements. Focus group participants also suggested video topics such as developing time management and study skills regardless of program of study. Recommendations moving forward include covering only one topic per video to increase relevance and creating a larger library of video topics for students to choose from. Additionally, student feedback suggests that shorter videos (three to five minutes in length) are more engaging than longer videos (15 to 20 minutes in length).

Participants also reported that these videos would have been very helpful early on in their college career and that they should be available in multiple online locations to increase access. Moving forward, OTCC should consider promoting these videos across the college's website, in the student portal, on the college's app, and faculty can include the videos in their Canvas courses as supplemental resources. Participants made it clear that all students need and should have access to this information regardless of whether or not they enroll in a counseling course. Given the findings that no students reported a decrease in knowledge or understanding, these videos can effectively serve as supplemental resources that do not supplant any existing services at OTCC.

Finally, participants reported that the modeling component of the videos was perhaps the most helpful aspect of the intervention. Participants reported feeling confused by the college's multiple online platforms and its continually changing webpages. Focus group participants even reported that when they go and meet with a counselor, they do not leave with more clarity on how to use their student portal or how to perform critical functions such as registering for classes and checking their progress to completion. It is recommended that not only do additional video

modules include modeling, but that faculty and staff at the college also increase their efforts to show students how to use the college's resources.

**Implications for Future Research**

There are also implications for future research based on this study's findings. First, OTCC is located in a relatively affluent county in northern California with a higher completion rate compared to the rest of the state. While OTCC is a designated Hispanic Serving Institute and serves English Language Learners, first-generation college students, and low-income students, further research should be conducted at colleges with lower completion rates and different student demographics. Additionally, as discussed in the limitations section of this chapter, a larger sample size comprised of students with a broader range of academic programs and enrollment lengths could yield different results.

Other implications for future research relate to accessing support services. It may be helpful for OTCC to track participants' utilization of support services including meeting with a counselor, visiting the tutorial center, or applying for financial aid. Given the many factors that contribute to community college student completion, understanding the access to and experiences with college support services will add rich data to student completion research. Following this, the researcher is interested in researching the disparities in pre-video scores and the factors that led to some participants rating their pre-video knowledge as a level four or five and others who rated themselves as a level one or two. It would also be interesting to track this study sample and measure these participants' academic progress, time-to-completion, and completion rates.

Other recommendations relate to the format and widespread usability of the intervention. While participants reported that the video modules were an effective and accessible method for

sharing information with students, future research could explore showing these videos in face-to-face classes and allowing for dialogue and reflection between students and their instructors. While the intervention effectively used modeling within the authentic context of the college, finding new ways to incorporate more legitimate peripheral participation and communities of practice may strengthen the intervention's effectiveness, student outcomes, and organizational health of community colleges.

## References


Alfonso, M., Bailey, T. R. & Scott, M. (2005). The educational outcomes of occupational sub-baccalaureate students: Evidence from the 1990s. *Economics of Education. Review, 24,* 197-212. doi:10.1016/j.econedurev.2004.02.003

Aljohani, O. (2016). A comprehensive review of the major studies and theoretical models of student retention in higher education. *Higher Education Studies, 6*(2), 1-18. doi:10.5539/hes.v6n2p1

Allen, J. M., Smith, C L., & Muehleck, J. K. (2013). What kinds of advising are important to community college pre- and posttransfer students? *Community College Review, 41*(4), 330-345. doi:10.1177/0091552113505320

Ancess, J., & Ort Wichterle, S. (2001). Making school completion integral to school purpose and design. *UCLA: The Civil Rights Project / Proyecto Derechos Civiles*. Retrieved from https://escholarship.org/uc/item/30j264wj

Astin, A. W. (1993). *What matters in college: Four critical years revisited.* San Francisco, CA: Jossey-Bass.

Bahr, P. R. (2008). "Cooling out" in the community college: What is the effect of academic advising on students' chances of success? *Research in Higher Education*, *49*(8), 704–732. doi:10.1007/s11162-008-9100-0

Bailey, T. (2017). Community colleges and student success: Models for comprehensive reform. *Educause Review.* Retrieved from http://er.educause.edu

Baranowski, T., & Stables, G. (2000). Process evaluations of the 5-a day projects. *Health Education and Behavior, 27*, 157-166. doi:10.1177/109019810002700202

Bean, J. P. (1980). Dropouts and turnover: The synthesis and test of a causal model of student attrition. *Research in Higher Education, 12*(2), 155-187. doi:10.1007/BF00976194

Bean, J. P. (1982). Conceptual models of student attrition: How theory can help the instituional researcher. In E. Pascarella (Ed.), *New directions for institutional research: Studying student attrition* (pp. 17-33). San Francisco: Jossey-Bass.

Bean, J., & Metzner, B. (1985). A Conceptual Model of Non-traditional Undergraduate Student Attrition. *Review of educational research*, *55*(4), 485-540. doi:10.3102/00346543055004485

Benson, A. D., Johnson, S. D., Taylor, G. D., Treat, T., Shinkareva, O. N., & Duncan, J. (2005). Achievement in online and campus-based career and technical education (CTE) courses. *Community College Journal of Research and Practice*, *29*(5), 369–394. doi:10.1080/10668920590921589

Bers, T., & Schuetz, P. (2014). Nearbies: A missing piece of the college completion conundrum. *Community College Review, 42*(3), 167-183. doi:10.1177/0091552114525834

Bickerstaff, S., Barragan, M., & Rucks-Ahidiana, Z. (2017). Experiences of earned success: Community college students' shifts in college confidence. *International Journal of Teaching and Learning in Higher Education, 29*(3), 501-510. Retrieved from http://www.isetl.org/ijtlhe

Boggs, G. R. (2011). The American community college: From access to success. *About Campus, 16*(2), 2-10. doi:10.1002/abc.20055

Bourdieu, P. (1977). Cultural reproduction and social reproduction. In J. Karabel & A. Halsey (Eds.), *Power and ideology* (pp. 487-510). New York, NY: Oxford University Press.

Bowen, W. G., Chingos, M. M., & McPherson, M. S. (2009). *Crossing the finish line: Completing college at America's public universities.* Princeton, New Jersey: Princeton University Press.

Braun, V., & Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative Research in Psychology*, *3,* 77–101. doi:10.1191/1478088706qp063oa

Braxton, J. M., Hirschy, A. S., & McClendon, S. A. (2004). *Understanding and reducing college student departure.* San Francisco, CA: Jossey-Bass.

Bureau of Labor Statistics, U.S. Department of Labor (2019). *BLS Data Viewer.* Retrieved from http://beta.bls.gov

Burns, E., Kimmel, S. C., & DiScala, J. (2019). E-Advising: Expanding advising for distance LIR students. *Journal of Library and Information Services in Distance Learning, 13*(4), 369-385. doi:10.1080/1533290X.2019.1705454

Byrd, K. L., & Macdonald, G. (2005). Defining college readiness from the inside out: First-generation college student perspectives. *Community College Review, 33*(1), 22-37. doi:10.1177/009155210503300102

Cabrera, A., Nora, A., & Castaneda, M. (1993). College persistence: Structural equations modeling test of an integrated model of student retention. *The Journal of Higher Education*, *64*(2), 123-139. doi:10.2307/2960026

Calcagno, J. C., Crosta, P., Bailey, T., & Jenkins, D. (2007). Does age of entrance affect community college completion probabilities? Evidence from a discrete-time hazard model. *Educational Evaluation and Policy Analysis, 29*(3), 218-235. doi:10.3102/0162373707306026

Calcagno, J. C., Bailey, T., Jenkins, D., Kienzl, G., & Leinbach, T. (2008). Community college student success: What institutional characteristics make a difference? *Economics of Education Review, 27*(6), 632–645. doi:10.1016/j.econedurev.2007.07.003

California Community Colleges Chancellor's Office (2019). *Management information systems datamart.* Retrieved from http://datamart.cccco.edu/

California Community Colleges Chancellor's Office (2018). *Non-technical student centered funding formula frequently asked questions.* Retrieved from http://extranet.cccco.edu/Portals/1/CFFP/Fiscal_Services/SCFF/Non-TechnicalStudentCenteredFundingFormulaFAQs.pdf

California Department of Education (2018). *College admission requirements – CalEd facts.* Retrieved from https://www.cde.ca.gov/ci/gs/ps/cefcollegereqs.asp

Center for Community College Student Engagement (2019). *CCSSE – Community college survey of student engagement.* Retrieved from https://www.ccsse.org

Chase, J. A., Houmanfar, R., Hayes, S. C., Ward, T. A., Vilardaga, J. P., & Follette, V. (2013). Values are not just goals: Online ACT-based values training adds to goal setting in improving undergraduate college student performance. *Journal of Contextual Behavioral Science, 2*(3-4), 79-84. doi:10.1016/j.jcbs.2013.08.002

Cho, S-W., & Karp, M. M. (2013). Student success courses in the community college: Early enrollment and educational outcomes. *Community College Review, 41*(1), 86-103. doi:10.1177/0091552112472227

Cohen, A. M., Brawer, F. B., & Kisker, C. B. (2014). *The American community college* (6th ed.). San Francisco, CA: Jossey-Bass.

Conger, D., & Long, M. C. (2010). Why are men falling behind? Gender gaps in college

performance and persistence. *The ANNALS of the American Academy of Political Social Science, 627*(1), 184-214. doi:10.1177/0002716209348751

Coutinho, S. A. (2007). The relationship between goals, metacognition, and academic success. *Educate~, 7*(1), 39-47. Retrieved from http://www.educatejournal.org

Creswell, J., & Plano-Clark, V. (2018). *Designing and conducting mixed methods research.* Thousand Oaks, CA: Sage.

Creswell, J. W., & Poth, C. N. (2018). *Qualitative inquiry and research design: Choosing among five approaches* [Google Books version]. Retrieved from https://books.google.com

Cummins, P.A. (2015). The role of community colleges in career transitions for older workers. *Community College Journal of Research and Practice, 39*(3), 265-279. doi:10.1080/10668926.2013.843144

Dane, A. V., & Schneider, B. H. (1998). Program integrity in primary and early secondary prevention: Are implementation effects out of control? *Clinical Psychology Review, 18*(1)*,* 23-45. doi:10.1016/s0272-7358(97)00043-3

David, K. M., Lee, M. E., Bruce, J. D., Coppedge, B. R., Dickens, D., Friske, J., …Thorman, J. (2015). Barriers to success predict fall-to-fall persistence and overall GPA among community college students. *Journal of Applied Research in the Community College, 21*(1), 1-9. Retrieved from http://www.montezumapublishing.com/jarcc1

Davidson, C. J. (2015). Precollege factors and leading indicators: Increasing transfer and degree completion in a community and technical college system. *Community College Journal of Research and Practice, 39*(11), 1007-1021. doi:10.1080/10668926.2014.919619

Department of Homeland Security (2012). *What is community college?* Retrieved from: https://studyinthestates.dhs.gov/2012/03/what-is-community-college

Dougherty, M. L. (2017). *Researching mining conflicts using mixed methods* [Video file]. Retrieved from SAGE Research Methods website: https://methods.sagepub.com/video/popup/researching-mining-conflicts-using-mixed-methods?seq=1

Dusenbury, L., Brannigan, R., Falco, M., & Hansen, W. B. (2003). A review of research on fidelity of implementation: Implications for drug abuse prevention in school settings. *Health Education Research, 18,* 237–256. doi:10.1093/her/18.2.237

Fishbein, M., & Ajzen, I. (1975). *Belief, attitude, intention, and behavior: An introduction to theory and research.* Reading, Mass: Addison-Wesley.

Gill, P. W., & Harrison, L. M. (2018). The completion agenda impact on student affairs practice in community colleges. *Community College Journal of Research and Practice*, *42*(11), 797–811. doi:10.1080/10668926.2018.1448728

Goldin, C., Katz, L. F., & Kuziemko, I. (2006). The homecoming of American college women: The reversal of the college gender gap. *Journal of Economic Perspectives, 20*(4), 133-156. doi:10.1257/jep.20.4.133

Goldrick-Rab, S. (2010). Challenges and opportunities for improving community college student success. *Review of Educational Research, 80*(3), 437-469. doi:10.3102/0034654310370163

Gurantz, O. (2015). Who loses out? Registration order, course availability, and student behaviors in community college. *Journal of Higher Education, 86*(4), 524-563. doi:10.1353/jhe.2015.0021

Hadwin, A. F., & Webster, E. A. (2013). Calibration in goal setting: Examining the nature of judgments of confidence. *Learning and Instruction, 24,* 37-47. doi:10.1016/j.learninstruc.2012.10.001

Harrell, K., & Holcroft, C. (2012). *Searching for an authentic definition of student success.* Retrieved from Academic Senate for California Community Colleges website: https://www.asccc.org/content/searching-authentic-definition-student-success

Hart, B. A. (2019). Hanging in, stopping out, dropping out: Community college students in an era of precarity. *Teachers College Record, 121*(2), 1-29. Retrieved from http://www.tcrecord.org

Hill, L. G. (2020). Back to the future: Considerations in use and reporting of the retrospective pretest. *International Journal of Behavioral Development 44*(2), 184-191. doi:10.1177/0165025419870245

Hillman, N. W., & Orians, E. L. (2013). Financial aid's role in meeting state college completion goals. *Education Finance and Policy, 8*(3), 349-363. doi:10.1162/EDFP_a_00100

Hooker, S., & Brand, B. (2010). College knowledge: A critical component of college and career readiness. *New Directions for Youth Development, 127,* 75-85. doi:10.1002/yd.364

Hossainy, F. N., Zare, H., Hormozi, M., Shaghaghi, F., & Hossain, M. (2012). Designing and implementing a situated learning program and determining its impact on the students' motivation and learning. *Turkish Online Journal of Distance Education, 13*(2), 36-47. Retrieved from http://tojde.anadolu.edu.tr/

Jenkins, D., & Cho, S-W. (2014). Get with the program . . . and finish it: Building guided pathways to accelerate student learning and success. *New Directions for Community Colleges, 2013*(164), 27–35. doi:10.1002/cc.20078

Jessup-Anger, J. E. (2011). What's the point? An exploration of students' motivation to learn in a first-year seminar. *The Journal of General Education, 60*(2), 101-116. doi:10.5325/jgeneeduc.60.2.0101

Kalamkarian, H. S., & Karp, M. M. (2015). *Student attitudes toward technology-mediated advising system* (CCRC Working Paper No. 82). New York, NY: Columbia University, Teachers College, Community College Research Center.

Karp, M. M., & Bork, R. H. (2014). "They never told me what to expect, so I didn't know what to do": Defining and clarifying the role of a community college student. *Teachers College Record, 115*(5), 1-40. Retrieved from http://www.tcrecord.org

Klempin, S., Pellegrino, L., Lopez, A. G., Barnett, E. A., Lawton, J. (2019). *iPass in practice: Four case studies* (CCRC Research Report August 2019). New York, NY: Columbia University, Teachers College, Community College Research Center.

Košutić, I. (2017). The role of cultural capital in higher education access and institutional choice. *Center for Educational Policy Studies Journal, 7*(1), 149-169. Retrieved from http://www.cepsj.si

Lave, J., & Wenger, E. (1991). *Situated learning: Legitimate peripheral participation.* Cambridge, UK: Cambridge University Press. doi:10.1017/cbo9780511815355.003

Leppel, K. (2002). Similarities and differences in the college persistence of men and women. *The Review of Higher Education, 25*(4), 433-450. doi:10.1353/rhe.2002.0021

Leviton, L. C., & Lipsey, M. W. (2007). A big chapter about small theories: Theory as method: Small theories of treatments. *New Directions for Evaluation, 2007*(114), 27–62. doi:10.1002/ev.224

Li, A. Y., & Kennedy, A. I. (2018). Performance funding policy effects on community college outcomes: Are short-term certificates on the rise? *Community College Review, 46*(1), 3-39. doi:10.1177.0091552117743790

Lincoln, Y. S., & Guba, E. G. (1985). *Naturalistic inquiry.* Thousand Oaks, CA: Sage.

Lohman, E., & Dingerson, M. (2005). The Effectiveness of occupational-technical certificate programs: Assessing student career goals. *Community College Journal of Research and Practice, 29*(5), 339-355. doi:10.1080/10668920590911850

Martin, K., Galentino, R., & Townsend, L. (2014). Community college student success: The role of motivation and self-empowerment. *Community College Review, 42*(3), 221-241. doi:10.1177/0091552114528972

Mayer, A., Kalamkarian, H. S., Cohen, B., Pellegrino, L., Boynton, M., & Yang, E. (2019). *Integrating technology and advising: Studying enhancements to colleges' iPASS practices* (MDRC Report). Retrieved from MDRC website: https://www.mdrc.org/publication/integrating-technology-and-advising

McArthur, R. C. (2005). Faculty-based advising: An important factor in community college retention. *Community College Review, 32*(4), 1-18. doi:10.1177/009155210503200402

Mercer, J. (2010). Exploring the process of self-development encountered by adult returners to higher education: A lifespan psychology perspective. *Psychology Teaching Review, 16*(1), 24-36. Retrieved from http://www.bps.org.uk/ptr

Miles, M. B. (1965). Planned change and organizational health: Figure and ground. In Kitchel, J. M., *Change processes in the public schools* (pp. 11-34). Eugene, OR: The Center for Advanced Study of Educational Administration, University of Oregon.

Miles, M.B., Huberman, A.M., & Saldaña, J. (2020). *Qualitative data analysis: A methods sourcebook.* Thousand Oaks, CA: Sage Publications.

Miller, A. (2013). Institutional practices that facilitate bachelor's degree completion for transfer students. *New Directions for Higher Education, 162,* 39-50. doi:10.1002/he.20055

Moore, C., & Shulock, N. (2010). *Divided we fail: Improving completion and closing racial gaps in California's community colleges.* Retrieved from Institute for Higher Education Leadership and Policy website: http://www.csus.edu/ihelp

Mullin C. M., & Honeyman, D. S. (2007). The funding of community colleges: A typology of state funding formulas. *Community College Review, 35*(2), 113-127. doi:10.1177/0091552107306409

National Student Clearinghouse Research Center (2019). *Yearly Success and Progress Rates – 2019.* Retrieved from https://nscresearchcenter.org/snapshot-report-yearly-success-and-progress-rates-2019/

Nistor, N., Stanciu, D., Vanea, C., Sasu, V. M., & Dragota, M. (2014). Situated learning in young Romanian Roma successful learning biographies. *European Educational Research Journal, 13*(3), 312-324. doi:10.2304/eerj.2014.13.3.312

Nitecki, E. (2011). The Power of the Program: How the academic program can improve community college student success. *Community College Review, 39*(2), 98-120. doi:10.1177/0091552111404926

Noble, J., & Davies, P. (2009). Cultural capital as an explanation of variation in participation in higher education. *British Journal of Sociology of Education, 30*(5), 591-605. doi:10.1080/01425690903101098

Offenstein, J., & Shulock, N. (2010, September). Taking the next step: The promise of intermediate measures for meeting postsecondary completion goals. Boston, MA: Jobs for the Future. Retrieved from http://www.jff.org/sites/default/files/publications/ATD_TakingtheNextStep_092810.pdf

O'Gara, L., Karp, M. M., & Hughes, K. L. (2009). Student success courses in the community college: An exploratory student of student perspectives. *Community College Review, 36*(3), 195-218. doi:10.1177/0091552108327186

O'Shea, S., & Delahunty, J. (2018). Getting through the day and still having a smile on my face! How do students define success in the university learning environment? *Higher Education Research and Development, 37*(5), 1062-1075. doi:10.1080/07294360.2018.1463973

Oh, C. J., & Kim, N. Y. (2015). 'Success is relative': Comparing social class and ethnic effects in an academic paradox. *Sociological Perspectives*, *59*(2), 270–295. doi:10.1177/0731121415587115

Özüdogru, M., & Özüdogru, F. (2017). The effect of situated learning on students' vocational English learning. *Universal Journal of Educational Research, 5*(11), 2037-2044. doi:10.13189/ujer.2017.051120

Paige, J. B., & Daley, B. J. (2009). Situated cognition: A learning framework to support and guide high-fidelity simulation. *Clinical Simulation in Nursing, 5*(3), 97-103. doi: 10.1016/j.ecns.2009.03.120

Pascarella, E. T. (1980). Student-faculty informal contact and college outcomes. *Review of educational research*, *50*(4), 545. doi:10.3102/00346543050004545

Pascarella, E. T. (1982). *Studying Student Attrition.* San Francisco: Jossey-Bass.

Patton, M. (1990). *Qualitative evaluation and research methods (pp. 169-186).* Beverly Hills, CA: Sage

Pearson Foundation. (2011). *Pearson Foundation community college student survey: Summary of California results*. Retrieved from http://pearsonfoundation.org/downloads/cc_student_survey_california.pdf

Peaslee, D. (2018). The relationship between faculty confirmation and community college student self-efficacy. *Community College Journal of Research and Practice, 42*(10), 635-649. doi:10.1080/10668926.2017.1333931

Phillips, E. D. (2013). Improving advising using technology and data analytics. *Change: The Magazine of Higher Learning, 45*(1), 48-55. doi:10.1080/00091383.2013.749151

Pierce, D. (2015). Building toward completion: Five years into President Obama's 2020 college completion initiative, some community colleges have figured out how to move the needle on student success. *Community College Journal, 85*(4), 24-26. Retrieved from http://www.aacc.nche.edu/bookstore

Pizzolato, J. E., Oslon, A. B., & Monje-Paulson, L. N. (2017). Finding motivation to learn: Exploring achievement goals in California community college CalWORKS students. *Journal of Adult Development, 24*(4), 295-307. doi:10.1007/s10804-017-9267-8

Plichta, S. B., & Garzon, L. S. (2009). *Statistics for nursing and allied health.* Philadelphia, PA: Wolters Kluwer Health/Lippincott Williams & Wilkins.

Porchea, S. F., Allen, J., Robbins, S., & Phelps, R. P. (2010). Predictors of long-term enrollment and degree outcomes for community college students: Integrating academic, psychosocial, socio-demographic, and situational factors. *Journal of Higher Education*, *81*(6), 750–778. doi:10.1080/00221546.2010.11779077

Porter, S. R., & Umbach, P. D. (2006). College major choice: An analysis of person-environment fit. *Research in Higher Education, 47*(4), 429-449. doi:10.1007/s11162-005-9002-3

Priest, K. L., Saucier, D. A., & Eiselein, G. (2016). Exploring students' experiences in first-year learning communities from a situated learning perspective. *International Journal of Teaching and Learning in Higher Education, 28*(3), 361-371. Retrieved from http://www.isetl.org/ijtlhe/

Roksa, J., & Kinsley, P. (2019). The role of family support in facilitating academic success of low-income students. *Research in Higher Education, 60*(4), 415-436. doi:10.1007/s11162-018-9517-z

Rootman, I. (1975). Voluntary withdrawal from a total adult socialization organization: A model. *Sociology of Education, 45,* 258-270. doi:10.2307/2112147

Rossi, P.H., Lipsey, M. W. & Henry, G.T. (2019). *Evaluation: A systematic approach*. Thousand Oaks, CA: Sage Publications.

Sandoval-Lucero, E., Antony, K., & Hepworth, W. (2017). Co-curricular learning and assessment in new student orientation at a community college. *Creative Education, 8,* 1638-1655. doi:10.4236/ce.2017.810111

Schippers, M. C., Scheepers, A. W. A., & Peterson, J. B. (2015). A scalable goal-setting intervention closes both the gender and ethnic minority achievement gap. *Palgrave Communications, 1*, 1-12. doi:10.1057/palcomms.2015.14

Schuetz, P. (2005). UCLA community college review: Campus environment: A missing link in studies of community college attrition. *Community College Review, 32*(4), 60-80. doi:10.1177/009155210503200405

Scrivener, S., & Coghlan, E. (2011). *Opening doors to student success: A synthesis of findings from an evaluation at six community colleges* (Policy Brief). Retrieved from MDRC website: https://www.mdrc.org/publication/opening-doors-student-success

Self-development (2019). In *Merriam-Webster.com.* Retrieved from https://www.merriam-webster.com/dictionary/self-development

Shadish, W., Cook, T., & Campbell, D. (2002). *Experimental and quasi-experimental designs for generalized causal inference*. Boston, MA: Houghton Mifflin.

Shapiro, D., Dundar, A., Wakhungu, P. K., Yuan, X., Nathan, A., & Hwange, Y. (2016). *Time to degree: A national view of the time enrolled and elapsed for associate and bachelor's degree earners* (Signature Report No. 11). Retrieved from National Student Clearinghouse Research Center website: http://nscresearchcenter.org

Shea, P., & Bidjerano, T. (2018). Online course enrollment in community college and degree completion: The tipping point. *International Review of Research in Open and Distributed Learning, 19*(2), 282-293. doi:10.19173/irrodl.v19i2.3460

Smith, C., & Allen, J. (2006). Essential functions of academic advising: What students want and get. *NACADA Journal, 26*(1), 56-66. doi:10.12930/0271-9517-26.1.56

Spady, W. (1970). Dropouts from higher education: An interdisciplinary review and synthesis. *Interchange*, *1*(1), 64-85. doi:10.1007/BF02214313

Spradlin, T. E., Burroughs, N. A., Rutkowski, D. J., & Lang, J. R. (2010). *College persistence and completion strategies: Opportunities for scaling up* (Policy Brief No. 8.4). Retrieved from Center for Evaluation and Education Policy website: http://www.indiana.edu/~ceep

Stufflebeam, D. L. (2003). The CIPP model for evaluation. In D. L. Stufflebeam & T. Kellaghan (Eds.), *The international handbook of evaluation* (pp. 31–61). Boston, MA: Kluwer Academic Publishers.

Teddlie, C., & Tashakkori, A. (2003). Major issues and controversies in the use of mixed methods in the social and behavioral sciences. In A. Tashakkori & C. Teddlie (Eds.), *Handbook of mixed methods in social and behavioral research* (pp. 3-50). Thousand Oaks, CA: Sage.

Thomas, D. (2014). Factors that influence college completion intention of undergraduate students. *Asia-Pacific Education Researcher, 23*(2), 225-235. doi:10.1007/s40299-013-0099-4

Tinto, V. (1975). Dropout from higher education: A theoretical synthesis of recent research. *Review of Educational Research, 45*(1), 89-125. doi:10.2307/1170024

Waldner, L., McDaniel, D., & Widener, M. (2011). E-advising excellence: The new frontier in faculty advising. *MERLOT Journal of Online Learning and Teaching, 7*(4), 551-561. Retrieved from http://jolt.merlot.org

Walpole, M. (2003). Socioeconomic status and college: How SES affects college experiences and outcomes. *The Review of Higher Education, 27*(1), 45-73. doi:10.1353/rhe.2003.0044

Xu, D., & Trimble, M. (2016). What about Certificates? Evidence on the labor market returns to nondegree community college awards in two states. *Educational Evaluation and Policy Analysis, 38*(2), 272-292. doi:10.3102/0162373715617827

Yazedjian, A., Toews, M. L., Sevin, T., & Purswell, K. E. (2008). “It’s a whole new world”: A qualitative exploration of college students’ definitions of and strategies for college

success. *Journal of College Student Development, 49*(2), 141-154. doi:10.1353/csd.2008.0009

Young-Jones, A. D., Burt, T. D., Dixon, S., & Hawthorne, M. J. (2013). Academic advising: Does it really impact student success? *Quality Assurance in Education, 21*(1), 7-19. doi:10.1108/09684881311293034

Yu, H., Campbell, D. & Mendoza, P. (2015). The relationship between the employment of part-time faculty and student degree and/or certificate completion in two-year community college. *Community College Journal of Research and Practice, 39*(11), 986-1006. doi:10.1080/10668926.2014.918910

Zeidenberg, M., Jenkins, P.D., & Calcagno, J. C. (2007). *Do student success courses actually help community college students succeed?* (CCRC Working Paper No. 36). New York, NY: Columbia University, Teachers College, Community College Research Center.

Zhang, G., Zeller, N., Griffith, R., Metcalf, D., Williams, J., Shea, C., & Misulis, K. (2011). Using the context, input, process, and product evaluation model (CIPP) as a comprehensive framework to guide the planning, implementation, and assessment of service-learning programs. *Journal of Higher Education Outreach and Engagement, 15*(4), 57–83. Retrieved from http://openjournals.libs.uga.edu/index.php/jheoe/article/view/628

# Appendix A

## Needs Assessment Student Survey

[redacted] **Student Survey - Fall 2016**

**Dear [redacted] Student,**

**[redacted] is committed to helping our students succeed in college. In order to improve our services, we would like some input from you. This is an anonymous survey. We do not ask for your name or ID. Your individual answers will not be available to any instructor, staff member, or other student. We will report the overall results to the college community. This survey should take about 10-15 minutes to complete. Please use a black or blue ink pen, and place a check mark or X within the answer box. Thank you!**

**Q1 What is your student status THIS SEMESTER?**

- New (first time at any college) ***SKIP TO Q4*** ☐
- Continuing (continuing at [redacted] after attending last Spring or Summer) ☐
- New Transfer (first time at [redacted] but you have attended another college) ☐
- Returning (attended Fall 2012 or before) ☐

**IF "New" SKIP TO Q4**

**Q2 How many terms have you attended college before Fall 2016? Please include all terms, semesters or quarters, at all colleges ever attended.**

- 1-2 terms ☐
- 3-4 terms ☐
- 5-6 terms ☐
- 7-8 terms ☐
- 9-12 terms ☐
- 13+ terms ☐

**Q3 How many units/degrees have you earned in college ([redacted] or other) before Fall 2013?**

- 1-15 units ☐
- 16-29 units ☐
- 30-59 units ☐
- 60+ units ☐
- AA/AS ☐
- BA/BS ☐
- MA/MS or higher ☐

**Q4 This semester, are you a part-time or full-time student?**

- Part-time (1-5 units) ☐
- Part-time (6-11 units) ☐
- Full-time (12 or more units) ☐

**Q5 When do you attend classes? *Mark all that apply.***

- Day - mornings ☐
- Day - afternoons ☐
- Evenings ☐
- Friday and/or Weekends ☐
- On-line ☐

**Q6 Where do you attend classes? *Mark all that apply.***

- On-line ☐
- [redacted] campus ☐
- [redacted] Center ([redacted]) ☐
- [redacted] campus ☐
- [redacted] ☐
- [redacted] Center ☐
- Other ☐

**Q7 Where do you use college services, such as counseling, registration, etc.? *Mark all that apply.***

- On-line ☐
- [redacted] campus ☐
- [redacted] Center ([redacted]) ☐
- [redacted] campus ☐
- [redacted] ☐
- [redacted] Center ☐
- Other ☐

**Q8 Where do you live? Please write your ZIP code CAREFULLY in the boxes at right.** ☐☐☐☐☐

Page:1

**Q9 What is your usual transportation to and from your class(es)? *Mark one.***

- Bicycle ☐
- Bus ☐
- Car ☐
- Carpool ☐
- I get a ride ☐
- Motorcycle ☐
- Walk ☐

Other:

**Q10 During this semester, are you working for pay?**

- No paid work ☐
- Part-time (1-14 hours per week) ☐
- Part-time (15-34 hours per week) ☐
- Full-time (35 hours or more per week) ☐

**Q11 This semester, are you receiving need-based Financial Aid (BOG, grants, student loans)?**

- Yes ☐
- No ☐
- I don't know ☐

**Q12 What is your <u>main</u> educational goal at [redacted]? Check one.**

- Certificate (earn a certificate in a job-related program) ☐
- Transfer (transfer to a four-year college with or without an AA/AS degree) ☐
- AA/AS (earn a 2 year college degree) ☐
- Job training (take courses to acquire new job skills or update current job skills) ☐
- Improve basic skills ☐
- Prepare for GED ☐
- Not sure/Undecided ☐
- Exploring educational interests and goals ☐

**Q13 What is your gender identification?**

- Male ☐
- Female ☐
- Other ☐

**Q14 What is your sexual orientation?**

- Heterosexual (straight) ☐
- Homosexual (gay/lesbian) ☐
- Bisexual ☐

Other

**Q15 Do you identify as Transgender?**

- Yes ☐
- No ☐

**Q16 How old are you?**

- 19 or younger ☐
- 20 to 24 ☐
- 25 to 29 ☐
- 30 to 34 ☐
- 35 to 39 ☐
- 40 to 49 ☐
- 50 + ☐

**Q17 What is your racial/ethnic background? *Mark all that apply.***

- Native American ☐
- Asian ☐
- Black/African American ☐
- Hispanic/Latino ☐
- Pacific Islander/Filipino ☐
- White ☐
- I am an international student with a visa ☐

**Q18 What is your current housing situtation?**

- Living alone ☐
- Living with family ☐
- Living with roommates ☐
- Homeless, living in a shelter or motel ☐
- Homeless, living temporarily with someone else ☐
- Homeless, living in a car or encampment ☐

Other:

**Q19 Is English your primary language?**

Yes ☐ No ☐

**Q20 If English is NOT your primary language, then what is?**

- Japanese ☐
- Korean ☐
- Mandarin or other Chinese ☐
- Tagalog ☐
- Russian ☐
- Spanish ☐
- Tigrinya ☐
- Urdu ☐
- Vietnamese ☐

Other:

**Q21 Have either of your parents earned a college degree or higher?**

- Yes ☐
- No ☐
- I'm not sure ☐

**Q22 Are you a Veteran or dependent of a Veteran?**

- No ☐
- Yes - Active Duty/Reservist ☐
- Yes - Veteran/Inactive Ready Reservist ☐
- Yes - dependent of either a Veteran, Active Duty, or Reservist ☐

**Q23 Are you CURRENTLY taking any of the following courses? *Mark all that apply.***

- Any College Skills (CSKLS) Math course ☐
- Any College Skills (CSKLS) English course ☐
- Any ESL course ☐
- Math 150A/B or 151 ☐
- Any English 300 level course (e.g. 302, 305) ☐
- English 100 ☐

**Q24 Have you EVER taken any of the following courses? *Mark all that apply.***

- Any College Skills (CSKLS) Math course ☐
- Any College Skills (CSKLS) English course ☐
- Any ESL course ☐
- Math 150A/B or 151 ☐
- Any English 300 level course (e.g. 302, 305) ☐
- English 100 ☐

**Q25 Which mobile devices do you regularly bring with you to [redacted]? *Mark all that apply.***

- Tablet (Ipad, Kindle, Galaxy) ☐
- Smart phone ☐
- Laptop computer ☐
- Other (please specify):

**Q26 How would you prefer that [redacted] contact you?**

| | *Preferred* | *Not preferred* | *I don't use this* |
|---|---|---|---|
| Phone call | ☐ | ☐ | ☐ |
| Text messages | ☐ | ☐ | ☐ |
| Student portal/ my cubby | ☐ | ☐ | ☐ |
| E-mail | ☐ | ☐ | ☐ |
| US mail | ☐ | ☐ | ☐ |
| [redacted] website | ☐ | ☐ | ☐ |
| Facebook | ☐ | ☐ | ☐ |
| Twitter | ☐ | ☐ | ☐ |
| Mobile device app | ☐ | ☐ | ☐ |

**Q27 How are you engaged in student life outside of the classroom? *Mark all that apply.***

- Student Clubs ☐
- Student Government ☐
- Serving on College Wide Committees ☐
- Student Ambassadors ☐
- PEERS Coalition ☐
- Forensics Team ☐
- Learning Communities ☐
- Attendance at Activities and Events (Sports, Theatre, Cultural Events etc.) ☐
- Meeting with Faculty outside the classroom ☐
- Student Employment ☐
- Volunteering on or off campus ☐

Other:

**Q28 Have any of these challenges had an impact on your ability to stay in college during the past year? *Mark all that apply.* Challenges at [redacted]:**

- Access to Financial Aid Services ☐
- Access to Academic Counseling ☐
- Classes are not available at the time I need to take them ☐
- Classes are not available at the location (or campus) I want to take them ☐
- Classes I want are not available online ☐
- Class work is too hard ☐
- Parking ☐
- Too much to go through to get services/courses ☐
- I couldn't get into the classes I needed (the classes were full) ☐
- The classes I enrolled in were canceled ☐
- I cannot find the information I need on the [redacted] website ☐
- Difficulty completing the registration process ☐
- My learning style does not match instructor's teaching style ☐
- None of the above ☐

**Q29 Have any of these challenges had an impact on your ability to stay in college in the past year? *Mark all that apply.* Challenges outside [redacted]:**

- Childcare problems ☐
- Distractions or conflicts at home (hard to study) ☐
- Family pressure or responsibility ☐
- Financial problems (not having enough $$) ☐
- Housing problems ☐
- Job pressures (time schedule conflicts) ☐
- Lack of motivation & interest in attending college ☐
- Lack of self discipline to study or go to classes ☐
- Lack of clear educational/career goals ☐
- Overall time pressures ☐
- Personal problems ☐
- Physical health ☐
- Mental health ☐
- Transportation problems ☐
- Cost of text books ☐
- Inadequate computer/Internet access ☐
- None of the above ☐

**Q30 Have any other challenges (not listed above) had an impact on your ability to stay in college? How else can [redacted] support your academic success?**

**Q31 I received information that helped me decide to enroll at [redacted] from the following: *Mark all that apply***

- An [redacted] information booth at a fair or community event ☐
- An event on one of the [redacted] campuses ☐
- A family member ☐
- A friend ☐
- Other: ☐
- [redacted] website ☐
- My high school counselor or teacher ☐
- An [redacted] representative who came to my school ☐
- I don't know ☐

**Q32** **At [redacted], I have generally been treated with respect by:**

| | Strongly Agree | Agree | Disagree | Strongly Disagree | Not Applicable |
|---|---|---|---|---|---|
| Instructors | ☐ | ☐ | ☐ | ☐ | ☐ |
| Students | ☐ | ☐ | ☐ | ☐ | ☐ |
| Office staff | ☐ | ☐ | ☐ | ☐ | ☐ |
| Administrators | ☐ | ☐ | ☐ | ☐ | ☐ |
| Counselors | ☐ | ☐ | ☐ | ☐ | ☐ |
| District Police personnel | ☐ | ☐ | ☐ | ☐ | ☐ |
| Librarians, library staff | ☐ | ☐ | ☐ | ☐ | ☐ |
| Other staff | ☐ | ☐ | ☐ | ☐ | ☐ |

**Q33** **Please indicate your level of agreement with the following statements.**

| | Strongly Agree | Agree | Disagree | Strongly Disagree | Not Applicable |
|---|---|---|---|---|---|
| I feel welcome at [redacted] | ☐ | ☐ | ☐ | ☐ | ☐ |
| I have a clear educational goal | ☐ | ☐ | ☐ | ☐ | ☐ |
| I experience a sense of community at [redacted] | ☐ | ☐ | ☐ | ☐ | ☐ |
| My instructors make me feel welcome to discuss things with them outside of class | ☐ | ☐ | ☐ | ☐ | ☐ |
| I feel supported by academic counselors at [redacted] | ☐ | ☐ | ☐ | ☐ | ☐ |
| I have developed a supportive relationship with at least one [redacted] instructor, counselor, or staff member | ☐ | ☐ | ☐ | ☐ | ☐ |
| Because of my background and personal experiences, I feel isolated at [redacted] | ☐ | ☐ | ☐ | ☐ | ☐ |
| Through course information and activities, my appreciation of people with backgrounds different from mine has increased | ☐ | ☐ | ☐ | ☐ | ☐ |
| [redacted] cares about me as an individual | ☐ | ☐ | ☐ | ☐ | ☐ |
| I have developed an educational plan with an academic counselor at [redacted] | ☐ | ☐ | ☐ | ☐ | ☐ |
| Because of my background and personal experiences, I feel supported at [redacted] | ☐ | ☐ | ☐ | ☐ | ☐ |
| I feel I have been as successful as I could be at [redacted] | ☐ | ☐ | ☐ | ☐ | ☐ |
| I am aware of the "Student Success Steps" (orientation, assessment, ed planning) | ☐ | ☐ | ☐ | ☐ | ☐ |

**Q34** [redacted]**'s mission is to improve the skills, increase the knowledge, and enhance the lives of the students who participate in our courses and programs. We want to know if we are achieving our mission.**

**To what extent do you think your** [redacted] **education so far has contributed to your knowledge, skills, and abilities in the following areas:**

| | *A lot* | *Some* | *A little* | *None* | *I don't know/can't answer* |
|---|---|---|---|---|---|
| Writing skills | ☐ | ☐ | ☐ | ☐ | ☐ |
| Reading comprehension skills | ☐ | ☐ | ☐ | ☐ | ☐ |
| Performing mathematical operations | ☐ | ☐ | ☐ | ☐ | ☐ |
| Using technology | ☐ | ☐ | ☐ | ☐ | ☐ |
| Developing self awareness and confidence | ☐ | ☐ | ☐ | ☐ | ☐ |
| Maintaining or improving personal health | ☐ | ☐ | ☐ | ☐ | ☐ |
| Appreciating the value of lifelong learning | ☐ | ☐ | ☐ | ☐ | ☐ |
| Listening actively and respectfully | ☐ | ☐ | ☐ | ☐ | ☐ |
| Speaking coherently and effectively | ☐ | ☐ | ☐ | ☐ | ☐ |
| Locating, analyzing, evaluating, and synthesizing relevant information | ☐ | ☐ | ☐ | ☐ | ☐ |
| Drawing reasonable conclusions in order to make decisions and solve problems | ☐ | ☐ | ☐ | ☐ | ☐ |
| Responding creatively to ideas and information | ☐ | ☐ | ☐ | ☐ | ☐ |
| Understanding and demonstrating social and civic responsibility | ☐ | ☐ | ☐ | ☐ | ☐ |
| Understanding and demonstrating personal responsibility | ☐ | ☐ | ☐ | ☐ | ☐ |
| Understanding and demonstrating environmental responsibility | ☐ | ☐ | ☐ | ☐ | ☐ |
| Becoming a more productive local and global citizen | ☐ | ☐ | ☐ | ☐ | ☐ |
| Recognizing and acknowledging individual and cultural diversity | ☐ | ☐ | ☐ | ☐ | ☐ |
| Practicing respectful interpersonal and intercultural communication | ☐ | ☐ | ☐ | ☐ | ☐ |
| Recognizing and understanding the ideas and values expressed in the worlds cultural traditions | ☐ | ☐ | ☐ | ☐ | ☐ |
| Managing resources (such as time and money) in order to advance my personal and career goals | ☐ | ☐ | ☐ | ☐ | ☐ |

**Q35** **Other comments:**

## Appendix B

## Needs Assessment – Student Interview Protocol

**Interviewees:** Current students who have been enrolled for at least two semesters, have completed at least 12 units, and are 18 years of age or older. 5-10 students

**Icebreaker Questions**
What year did you first enroll at this college?
Do you like it?
What are some of your current classes?

1. **Academic Preparation**

   ***GOAL:*** *To identify the impact of under-preparedness on student success and the students' role in compensating for any lack of academic preparation.*

   **Theme: How prepared were successful students?**
   - Why did you choose to attend a community college?
   - Do you feel you were prepared for the courses you are taking at the community college? What made you feel like you were prepared/unprepared?
   - Did you feel welcome or unwelcome the first time you came to this college? What made you feel that way? Could you give an example?

   **Theme: Student's role in overcoming any lack of preparation**
   - Have you had difficulty in any of your classes?
     - Which ones?
     - What difficulties did you have? Why do you think that was difficult for you?
   - Did you seek assistance from the teacher? How?
   - Do you participate in any study groups? How often? What do you do in the study groups you participated in?
   - Does this college offer tutoring or other academic support services? What services are offered?
   - How did you learn about tutoring or academic support services?
   - Do you use any tutoring or academic support services?
     - What are they like? Are they helpful?

2. **Social Organizational of Schooling**

   ***GOAL:*** *To determine whether the college provides a supportive culture and environment and to identify the services that are available to students in times of academic difficulty. To determine whether students utilized those services.*

   **Theme: School's role in overcoming any lack of preparation and the services available to facilitate student success**

- Does your community college do anything in particular to help you succeed? If so, what?
    - Can you describe those efforts?
- Are there specific teachers that contribute to your success? Tell me about them.
- Is there someone at this college other than a teacher that has helped you be more successful? Could you describe how the person helped you be successful?
- Can you think of any other person who went out of their way to assist you? Could you describe how that person went out of their way to assist you?
- Do you feel that this college is committed to your success?
    - If so, what makes you think this?
    - If not, can you think of something the school could do to help you?
- When you face a challenge, did you seek assistance?
    - If so, from who? Which department or office?
- If you have a question about your academic program and/or which courses you should enroll in, who do you usually ask?
    - Do you go to counseling? Is it required?
- Have you ever talked to a counselor at this college? What made you seek out counseling services? Was it helpful?
- Have you met with financial aid?
    - If so, how many times? What types of questions did you have for financial aid? What type of information did financial aid provide? Can you describe your meeting with financial aid?
    - If not, why not?

**3. Cultural Capital**

***GOAL: To identify*** *what successful students brought to community college in terms of knowledge and family/social support).*

- Did anyone influence you in your decision to attend community college? Who? How did they influence you? Can you give me an example of something they said?
- Approximately how many of your friends went to college? All, most, many, few, none?
- What are your family's expectations for your college attendance?
- Where do you live while in college?
    - How far do you live from school?
    - Who do you live with?
    - How do you usually get to campus?
    - Does your living situation have any impact on your studies?

**4. College Plans**

***GOAL: To determine whether*** *finances are an obstacle for being successful in community college. To determine the role of financial aid with respect to persistence and completion.*

**Theme: College Going**

- What did you know about financial aid before enrolling in community college?
- Have you been enrolled full-time or part-time throughout college?
    - What led you to that decision to be full-time or part-time?
    - How much do you work while in college?
- Can you describe your typical week?
- Do you have any children? If so, how do you deal with childcare while you are enrolled at this college? Has childcare ever been a problem? How? What did you do?
- Do you have any other family members whom you take care of? How do you take care of them? Has this ever been an issue while you were enrolled at this college? How? What did you do?
- Could you describe any challenges or hurdles you have faced while attending college that posed an obstacle to your success?

**Theme: Cost**

- Do you view the cost of college as a concern? Why or why not?

**5. Persistence**

***GOAL:*** *To determine whether or not successful students had a plan for completion of an associate's degree.*

**Theme: Initial Commitments**

- When you first enrolled, did you expect to graduate from this college?
- How long did you think it would take?
- How long do you think it will take you to meet your goal?

**Theme: Academic Integration**

- Do you ever talk to faculty members outside of class? What do you talk about?
- Describe your attendance.
- Do you think your attendance impacts your success? How?

**Theme: Social Integration**

- Are you involved in any extracurricular activities at your community college? Which ones? Why did you select those activities?
- Do you meet with fellow students outside of classroom? For what purpose? Where did you meet? Why did you meet in that place?

## Appendix C

### Needs Assessment – Counselor Interview Protocol

**Interviewees:** Counselors; 2-3

- What do you think are the characteristics of students who persist to graduation?
- Is academic counseling a requirement for students or a recommendation?
- Do you think counselors help students be successful?
    - How so? Could you please give an example?
- How well do you know your students?
- Do students in certain degree programs persist more than others? Which ones? Why do you think that is the case?
- Do some types of students persist more than others? What types? Why do you think that is?
- What percentage of students do you think utilize advice of academic counselors?
- Do you feel your college supports student success? How? Do you think the college's efforts to support student success are helpful?
- What do you think the college should do to increase its graduation rate?

## Appendix D

## Needs Assessment – Instructor Interview Protocol

**Interviewees:** Faculty Instructors; 2-3

- What do you think are the characteristics of students who persist to graduation?
- How much of a role does a faculty member play in helping students persist to graduation?
- What are academic barriers to student success? Could you give an example?
- What are personal barriers to student success? Could you give an example?
- What are cultural barriers to student success? Could you give an example?
- Do you feel your college supports student success? How? Do you think the college's efforts to support student success are helpful?
- What do you think the college should do to increase its graduation rate?

## Appendix E

### Needs Assessment – Administrator Interview Protocol

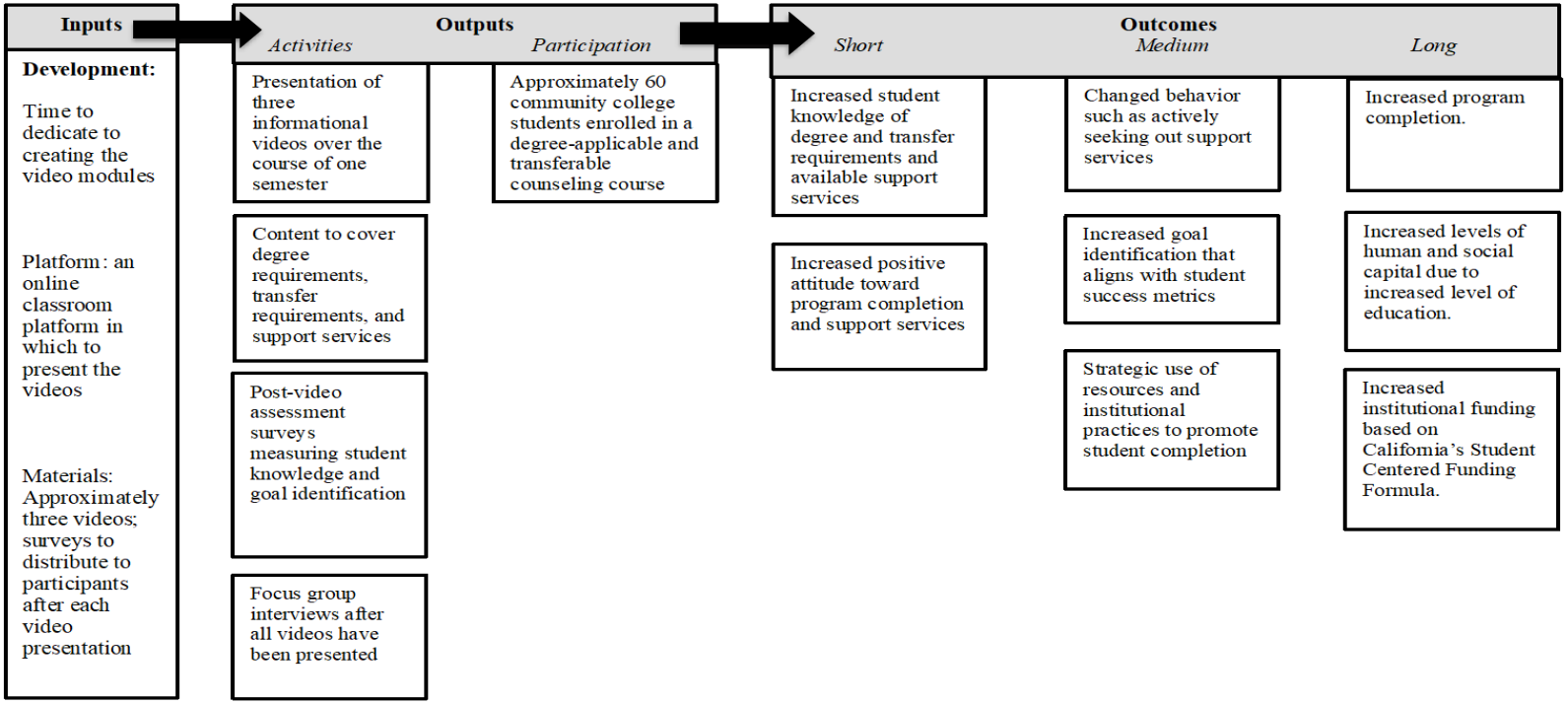
**Interviewees:** Administrators; 2-3

- What do you think are the characteristics of students who persist to graduation?
- How much of a role does an administrator play in helping students persist to graduation?
- What are the main barriers to student success?
- What does the school do to facilitate student success? Why does the school choose these particular actions? Are they successful? Are there other things you would like to implement? What? Why? Why haven't you implemented these things yet?

# Appendix F

## Logic Model

**Situation:** Of the 8.7 million students enrolled in community colleges across the United States, six years after initial enrollment only 39.2% of students had earned a college credential.




**Assumptions**
Students are unaware of degree and transfer requirements and campus support services.

Students are willing to change their education and/or career goals.
Three videos are enough to increase student knowledge and promote changed behavior.

**External Factors**
Varying degrees of student knowledge cannot be accounted for when creating video content for widespread use.

One-time format may not support information retention and continuous changed behavior.

## Appendix G

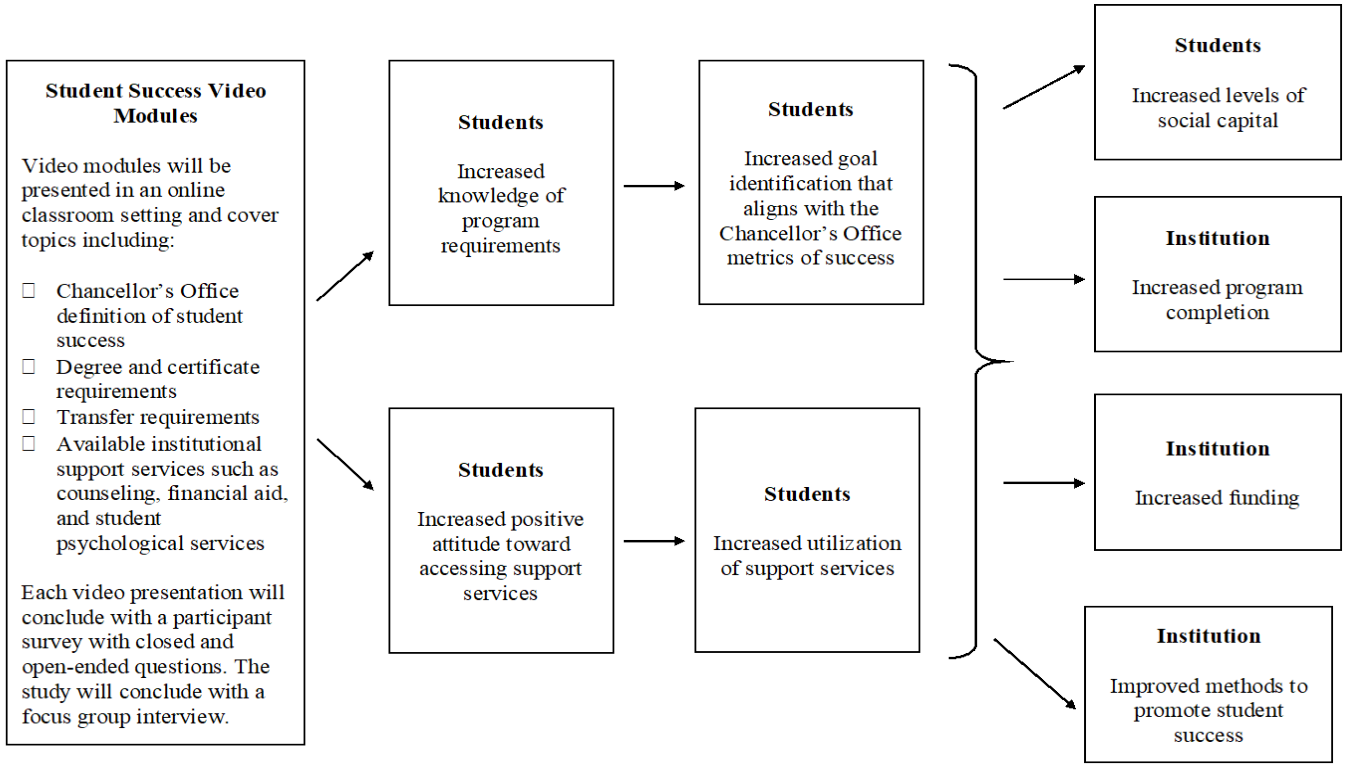
## Data Collection Matrix

| Process Evaluation | | | | | |
|---|---|---|---|---|---|
| **Process Evaluation Question** | **Construct** | **Data Source(s)** | **Measures** | **Frequency** | **Data Analysis** |
| **RQ 1** | | | | | |
| To what extent was the program implemented as designed? | Adherence | Researcher | Researcher self-report; intervention program plans | Once at the completion of the study | Descriptive statistics |
| **RQ 2** | | | | | |
| In what ways do the contents of the video modules effectively align with and coordinate with related agencies and services? | Context | Researcher; participants | Document analysis; focus groups | Once pre-intervention and once post-intervention | Descriptive statistics |
| **RQ 3** | | | | | |
| How do participants describe their participation in the program? | Quality of delivery | Participants | Retrospective pretests; focus groups | After each video module presentation; once at the completion of the study | Emergent coding and thematic analysis |
| **Outcome Evaluation** | | | | | |
| **Outcome Evaluation Question** | **Construct** | **Data Source(s)** | **Measures** | **Frequency** | **Data Analysis** |
| **RQ 4** | | | | | |
| In what ways did the video modules affect student understanding of program completion? | Participant level of knowledge | Participants | Retrospective pretests; focus groups | After each video module presentation; once at the | Matched pairs t-test; thematic analysis |

| | | | | | |
|---|---|---|---|---|---|
| | | | | completion of the study | |
| **RQ 5** | | | | | |
| In what ways did this intervention affect students' educational goals? | Participant understanding of educational options; participant goal identification | Participants | Retrospective pretests; focus groups | After each video module presentation; once at the completion of the study | Matched pairs t-test; thematic analysis |

# Appendix H

## Theory of Treatment



## Appendix I

## Survey #1

What is your student ID number? (This information will only be used to match your three surveys) [ ]

- What is your current educational goal? Select one.
- Transfer to a 4-year university with or without an AA/AS
- Earn an AA/AS
- Earn a certificate
- Improve basic skills
- Job training
- Prepare for the GED
- Not sure/undecided
- Other

What is your current major/program of study? [ ]

On a scale from 1 to 5 (1 meaning completely unknowledgeable and 5 meaning completely knowledgeable), please rate your knowledge level prior to viewing the video and after the video.

| | Before the Video | | | | | After the video | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | 1 | 2 | 3 | 4 | 5 | 1 | 2 | 3 | 4 | 5 |
| Knowledge of multiple forms of support services available in-person and online at the college? | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ |
| Knowledge of how to access various support services? | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ |
| Knowledge of which services to seek out for academic support as opposed to, for example, mental health supports of financial aid? | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ |

Write in your own responses for the following questions:

1. What was most helpful from this video?

2. What was least helpful from this video?

## Appendix J

## Survey #2

What is your student ID number? (This information will only be used to match your three surveys) [ ]

- What is your current educational goal? Select one.
- Transfer to a 4-year university with or without an AA/AS
- Earn an AA/AS
- Earn a certificate
- Improve basic skills
- Job training
- Prepare for the GED
- Not sure/undecided
- Other

What is your current major/program of study? [ ]

On a scale from 1 to 5 (1 meaning completely unknowledgeable and 5 meaning completely knowledgeable), please rate your knowledge level prior to viewing the video and after the video.

| | Before the Video | | | | | After the video | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | 1 | 2 | 3 | 4 | 5 | 1 | 2 | 3 | 4 | 5 |
| Knowledge of certificate and associate degree options? | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ |
| Knowledge of general education requirements? | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ |
| Knowledge of transfer requirements? | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ |

Write in your own responses for the following questions:

1. What was most helpful from this video?

2. What was least helpful from this video?

## Appendix K

### Survey #3

What is your student ID number? (This information will only be used to match your three surveys) [ ]

- What is your current educational goal? Select one.
- Transfer to a 4-year university with or without an AA/AS
- Earn an AA/AS
- Earn a certificate
- Improve basic skills
- Job training
- Prepare for the GED
- Not sure/undecided
- Other

What is your current major/program of study? [ ]

On a scale from 1 to 5 (1 meaning completely unknowledgeable and 5 meaning completely knowledgeable), please rate your knowledge level prior to viewing the video and after the video.

| | Before the Video | | | | | After the video | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | 1 | 2 | 3 | 4 | 5 | 1 | 2 | 3 | 4 | 5 |
| Knowledge of how the college defines program success? | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ |
| Knowledge of the many factors that contribute to student success? | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ |
| Knowledge of of how to find required classes for your degree or certificate? | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ |

Write in your own responses for the following questions:

1. What was most helpful from this video?

2. What was least helpful from this video?

## Appendix L

## Focus Group Interview Protocol

**Date and Time:** _____

**Participants Present:** _____

**Interviewer:** _____

**Introduction:** *Hello and thank you for participating in this focus group discussion. I appreciate your continued participation in this research study and am looking forward to hearing your reflections on the videos you watched throughout the semester. I will be asking you questions about what was most and least helpful, how relevant these videos were to you, and your own educational goals. Please feel free to ask me any questions throughout the conversation. Do you have any questions before we begin?*

**Questions:**

1. What were some helpful aspects of the videos? Why were they helpful? What aspects of the videos were less helpful? Why?
2. Did you feel that the material covered in the videos was relevant to you as a community college student? If so, why? If not, why not?
3. Which video topics were most relevant to you as a student?
4. How confident do you feel in your ability to define your educational goals?
5. How confident do you feel in your ability to achieve your educational goals?
6. How did watching these videos affect your knowledge of degree and transfer requirements? Support services?
7. Did you access any services at the college as a result of watching these videos?
8. Did these videos play any role in helping you clarify or define your educational goal?

9. Describe what it means to be a successful college student.
    i) What does it take to be successful here?
    ii) How do you feel about your success as a student currently?

## Appendix M

## Recruitment Message

Dear Students,

I am currently pursuing my doctorate at Johns Hopkins University, and my research explores community college student success and outcomes. As part of my study, I have created three brief videos on a range of topics related to student success and would like to get your input on the videos and your personal experiences.

Throughout the semester, the videos will be included in your class, which will then be followed by a short survey that should take approximately 1-3 minutes and a focus group interview that will take place via Zoom at the end of the semester. Your participation in this study (the surveys and interview) is entirely voluntary, but I would greatly appreciate your input. In total there will be one survey for each video (3) as well as an optional focus group interview at the end of the semester. Overall, participation in this study will take approximately 1.5 hours of your time.

**Why have I been invited to participate?**
This study is focused on community college students and how the college can support students' wide range of academic, personal, and professional goals.

**Why should I participate?**
Your input is critical to contributing to the existing knowledge of effective community college practices and how we can best support our students. If you choose to participate, your responses will not be personally identified.

**Must I participate?**
No. This study is absolutely voluntary, and you can withdraw your participation at any time. If you choose not to participate in this study, it will have **no** impact on your grade in this course.

If you have any questions or concerns, please let me know.

Thank you in advance for your input and participation.

Sincerely,

Kyla Wegman

**Appendix N**

**Informed Consent**

Johns Hopkins University
Homewood Institutional Review Board (HIRB)

**Informed Consent Form**

| | |
|---|---|
| **Title:** | **Community College Student Success** |
| **Principal Investigator:** | **Nicholas Michelli** |
| **Student Investigator:** | **Kyla Wegman** |
| **Date:** | **July 7, 2020** |

**PURPOSE OF RESEARCH STUDY:**

The objective of this study is to determine the effectiveness of a video module program in increasing community college student knowledge of program completion requirements and utilization of student support services. A maximum of 70 undergraduate community college students will participate in this study, to be completed over a three-month time period. Students will view three brief informational videos on topics such as degree requirements, transfer requirements, available support services, and techniques to promote student success. The participants will complete a one to three minute retrospective pretest survey after each of the three videos to measure increases in knowledge and understanding and will be invited to participate in one focus group interview at the end of the study to assess participant knowledge increases and participant experiences. Data from the three retrospective pretest surveys and the focus group interview will be used to determine the effectiveness of the intervention.

**PROCEDURES:**

- Participants will be asked to view three video modules in their Counseling course during the Fall 2020 semester
- Participants will also be asked to complete a short survey after each module is presented. These surveys should only take 1-3 minutes.
- After the three video modules, participants will be invited to participate in a 45-60 minute focus group interview that will be video and audio recorded via Zoom to share their experiences.

**RISKS/DISCOMFORTS:**

The risks associated with participation in this study are no greater than those encountered in daily life.

**BENEFITS:**
The study may improve community college students' knowledge of available support services, degree completion requirements, and transfer requirements. It may also help community colleges better support students and actively promote degree completion.

**VOLUNTARY PARTICIPATION AND RIGHT TO WITHDRAW:**
Your participation in this study is entirely voluntary: You choose whether to participate. If you decide not to participate, there are no penalties, and you will not lose any benefits to which you would otherwise be entitled.

If you choose to participate in the study, you can stop your participation at any time, without any penalty or loss of benefits. If you want to withdraw from the study, please contact the student researcher, Kyla Wegman, verbally or in writing.

**CONFIDENTIALITY:**
Any study records that identify you will be kept confidential to the extent possible by law. The records from your participation may be reviewed by people responsible for making sure that research is done properly, including members of the Johns Hopkins University Homewood Institutional Review Board and officials from government agencies such as the National Institutes of Health and the Office for Human Research Protections. (All of these people are required to keep your identity confidential.) Otherwise, records that identify you will be available only to people working on the study, unless you give permission for other people to see the records.

Additionally, all survey data completed electronically will be collected via a password protected Qualtrics account provided by Johns Hopkins University. Study records, including surveys and pre and post tests will be kept confidential. Names will not be linked in reporting. All records will be kept in a locked file cabinet and/or a touch ID and password protected computer.

**COSTS**
The cost associated with the study is the time required to attend program sessions in class and provide feedback.

**COMPENSATION:**
You will not receive any payment or other compensation for participating in this study.

**IF YOU HAVE QUESTIONS OR CONCERNS:**
You can ask questions about this research study now or at any time during the study, by contacting the researcher working with you by emailing kwegman2@jhu.edu or calling (707) 527-4626. You may also call Dr. Nicholas Michelli, Principal Investigator at (917) 882-7670. If you have questions about your rights as a research participant or feel that you have not been treated fairly, please call the Homewood Institutional Review Board at Johns Hopkins University at (410) 516-6580.

**SIGNATURES**

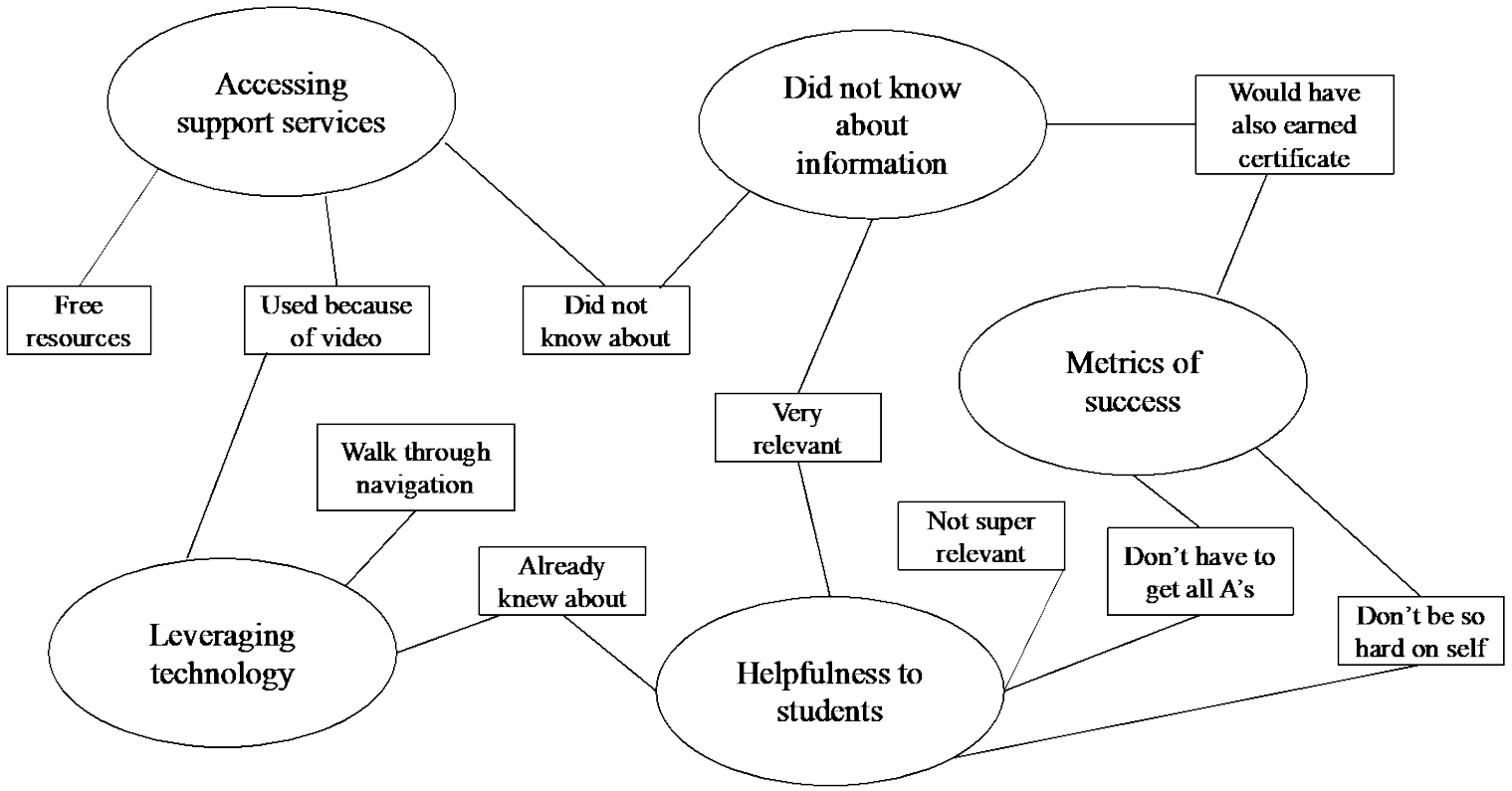
**WHAT YOUR SIGNATURE MEANS:**
Your signature below means that you understand the information in this consent form. Your signature also means that you agree to participate in the study.

By signing this consent form, you have not waived any legal rights you otherwise would have as a participant in a research study.

| | |
|---|---|
| **Participant's Signature** | **Date** |
| **Signature of Person Obtaining Consent (Investigator or HIRB Approved Designee)** | **Date** |

**Appendix O**

**Initial Thematic Map**



**Curriculum Vitae**


# K Y L A  W E G M A N

(707) 293-4417
kwegman2@jhu.edu


## Education

**Doctor of Education**, Entrepreneurial Leadership in Education — 2021
*Johns Hopkins University* — Baltimore, MD

**Master of Arts**, Counseling Psychology — 2015
*Boston College* — Chestnut Hill, MA

**Bachelor of Arts**, Anthropology — 2012
*University of California, Berkeley* — Berkeley, CA

## Professional Experience

**Department Chair** — 2020 – Present
[redacted], [redacted], CA

- Chair of Library & Learning Resources
- Supervise & evaluate 40+ faculty and staff
- Oversee multimillion dollar budget
- Coordinate department's course curriculum
- Accreditation faculty co-chair
- Chair of department hiring committees
- Spokesperson for department in college matters
- Organize and manage departmental scheduling

**Counseling Faculty** — 2018 – Present
[redacted], [redacted], CA

- Develop comprehensive education plans
- Provide career counseling
- Serve on 50+ advisory boards with local employers
- Courses taught: Career Development; Cultural Identity & Diversity; Introduction to College; College Success
- Specialize in Career & Technical Education
- Coordinate department's remote/online services
- Elected Academic Senator
- Member of Career & Technical Education Leadership Committee

**District-level Counselor** — 2017-2018
*Santa Rosa City Schools* — Santa Rosa, CA

- Analyzed district data pertaining to English Learners, homeless students, and foster youth
- Designed and oversaw language proficiency reclassification process
- Presented at state-level conferences on model for English Learner student success
- Co-authored district's English Learner Master Plan

**Research Intern** — 2017 (summer position)
*Santa Rosa Junior College, Office of Institutional Research* — Santa Rosa, CA

- Designed, administered, and interpreted result of college's "Leavers Survey"
- Presented data-informed recommendations to increase completion and decrease attrition

**Counselor** 2016-2017
*Santa Ana Unified School District* Santa Ana, CA

- Managed caseload of over 400 students
- Secured fully-funded college tours
- Advised students on postsecondary plans
- Created curriculum for department courses
- Oversaw college and financial aid applications
- Responsible for academic, career, & personal counseling

**Academic & College Counselor** 2015-2016
*Cornelia Connelly School* Anaheim, CA

- Managed caseload of 175 students
- Oversaw course selection, college planning, and academic interventions
- Designed comprehensive college planning guide
- Created grade-level seminars for all grades
- AP coordinator, testing coordinator, special education coordinator

**Graduate Student Mentor** 2014-2015
*Boston College* Chestnut Hill, MA

- Mentor to first year graduate students
- Conducted student advising and practicum check-ins
- Served on career panels

**Research Analyst** 2014-2015
*Boston Public Schools* Boston, MA

- Designed and conducted a research project focusing on the academic achievement and social-emotional well-being of at-risk students as they transitioned from middle to high school within the Boston Public Schools System

**Program Coordinator** 2014 (summer position)
*BELL (Building Educated Leaders for Life)* Dorchester, MA

- Oversaw 120 8th grade summer school students
- Interacted with students, teachers, & parents
- Evaluated 20+ teachers and teaching assistants
- Managed operating budget
- Partnered with BELL state and national leaders
- Responsible for faculty, staff, and student supervision

**Teaching Fellow** 2012-2013
*Israel Teaching Fellows* Netanya, Israel

- Volunteered with at-risk immigrant youth
- Demonstrated increased speaking, reading, and writing skills
- Responsible for one-on-one instruction, group work, and curriculum design

**English Teacher** 2012-2013
*College for All* Netanya, Israel

- Volunteered with at-risk Israeli high school students
- Attained increased English language verbal, reading, and writing skills
- Mentored students with a focus on social and emotional well-being

**Research Assistant** 2012 (summer position)
*Santa Rosa Junior College* Santa Rosa, CA

- Assistant to Dr. Nancy Chinn, researching transfer success factors of student athletes.

**Math Teaching Aide** 2011-2012
*Nea Community Learning Center* Alameda, CA

- Supported individual students with challenging math concepts
- Designed and taught a whole-class lesson each month

## Awards

Johns Hopkins University Graduate School of Education Aileen and Gilbert Schiffman Fellowship, 2018
Nominee, Sonoma County Excellence in Education Award, 2017
Boston College Lynch School of Education Dean's Award, 2014
Boston College Lynch School of Education Counseling Psychology Award, 2013

## Presentations

Wegman, K. H. (2019). *Community college student success: A needs assessment.* Paper presented at The Annual Research on Women and Education Conference, Nashville, TN.

Barrera, S., Battaglini, D., Rojas, S., & **Wegman, K. H.** (2017). *Removing obstacles: Leveling the ELL playing field.* California Association of School Counselors Annual Conference. Riverside, CA.

Barrera, S., Battaglini, D., Rojas, S. & **Wegman, K. H.** (2017). *SOLL counselors*. Santa Rosa City Schools Board of Education Meeting. Santa Rosa, CA.